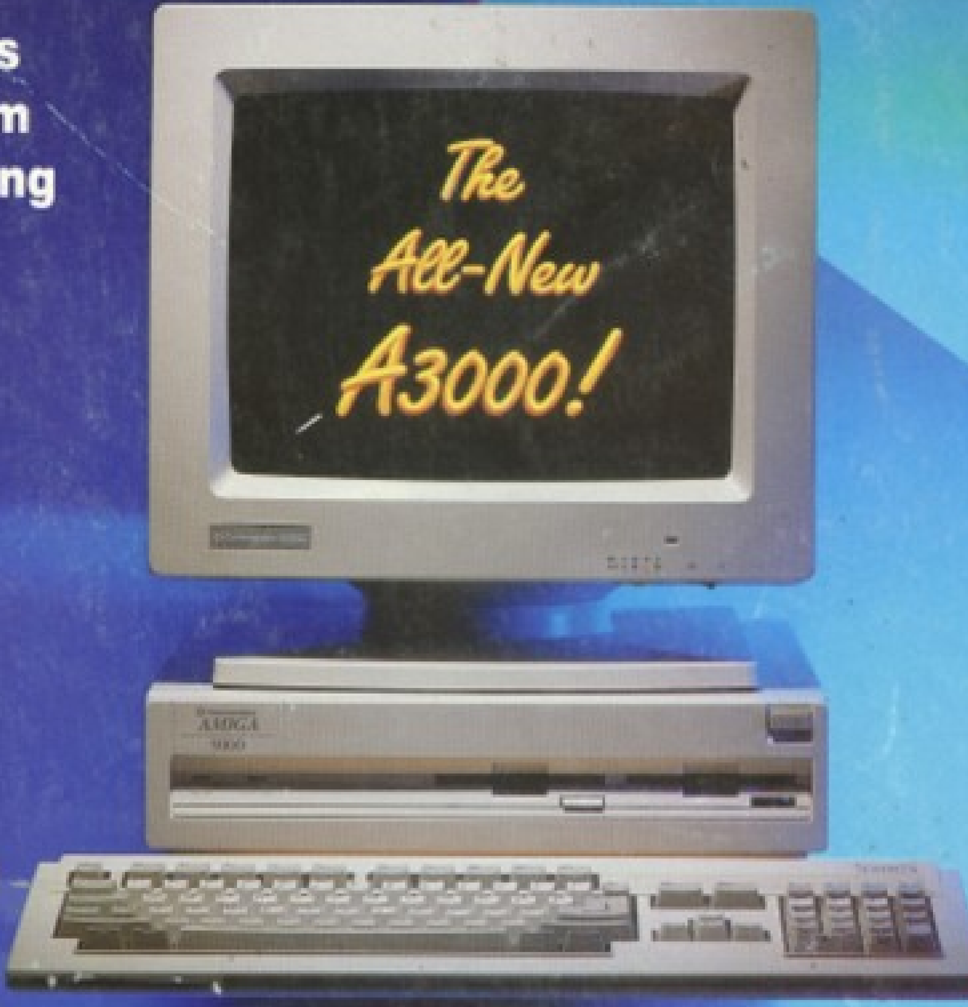
SPECIAL! Amiga 3000

AMIGA WORLD

June 1990
U.S.A. $3.95
Canada $4.50
UK £2.50
An IDG Communications Publication

THE *NEW* GENERATION!

- Amiga 3000 Features
- 2.0 Operating System
- AmigaVision Authoring
- Networks, Monitors And More!



Plus!

Interactive Multimedia:
Do-It-Yourself w/DVideo!

Digi-View Color:
Now from Videotape!

AND: **HAM Animation, Exec & Shell Tips, Reviews, Games & More!**

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GENLOCK AND OVERLAY SYSTEM

▲ Broadcast quality RS-170A composite output
▲ Two independent dissolve controls
▲ Software controllable
▲ Compatible with all Amiga® models
▲ Dual video outputs
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SUPERGEN IS THE PROVEN INDUSTRY STANDARD GENLOCK AND OVERLAY SYSTEM FOR THE AMIGA

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ALL THE QUALITY OF OUR ORIGINAL SUPERGEN™ NOW ON A CARD FOR THE AMIGA® 2000 SERIES

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▲ Optional remote dissolve console ($75)

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THE FIRST TRUE Y/C GENLOCK & OVERLAY CARD FOR THE AMIGA® 2000 SERIES COMPUTERS

▲ S-VHS, ED-BETA, Hi8 compatible
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▲ built in sync generator ▲ dissolves

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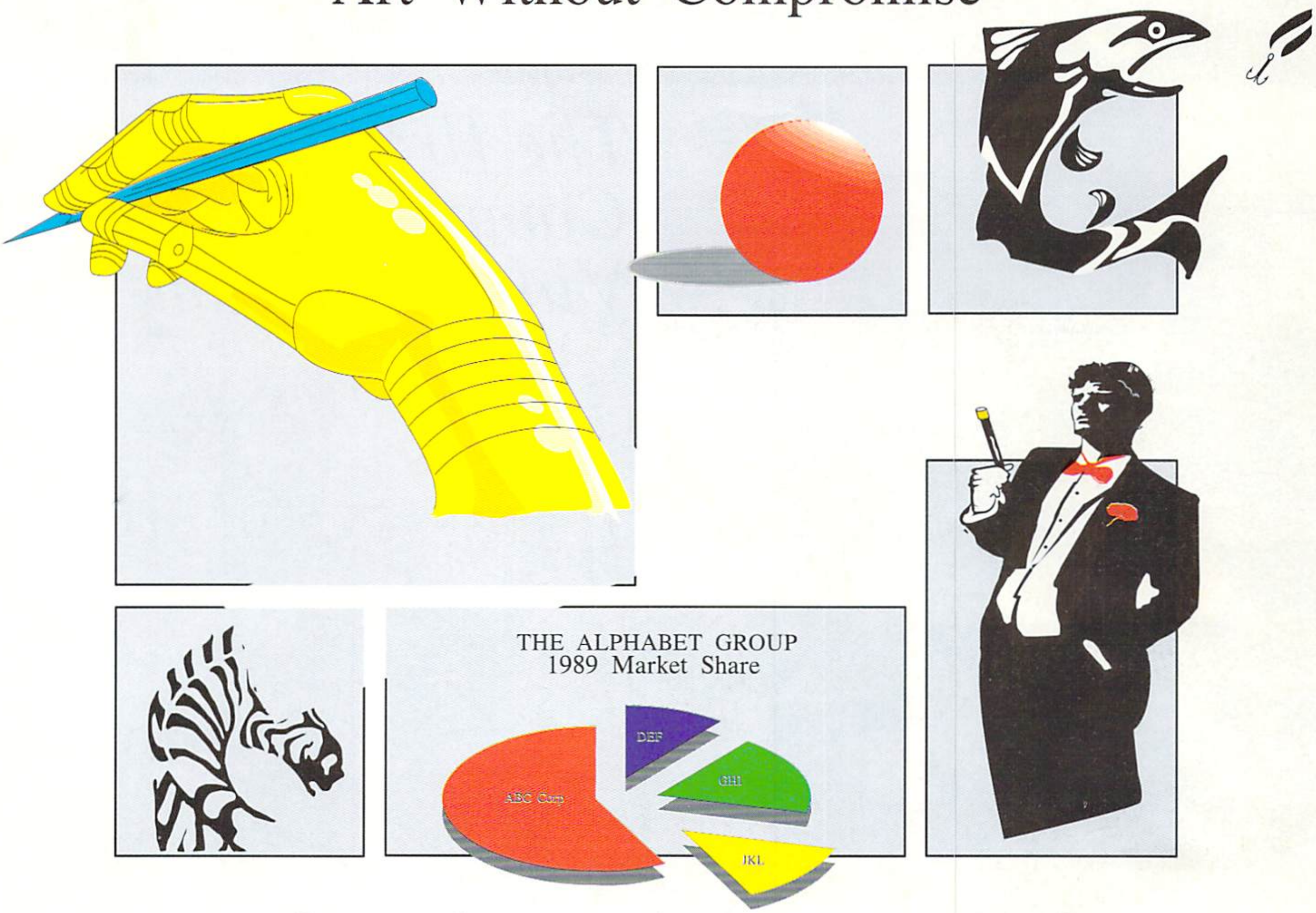
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Circle 28 on Reader Service card.

Art Without Compromise



Professional Draw 2.0

Professional Draw 2.0 redraws the boundaries of Amiga art and graphic design.

Up to ten times faster and with dozens of new features, Professional Draw 2.0 allows you to create stunning illustrations like never before.

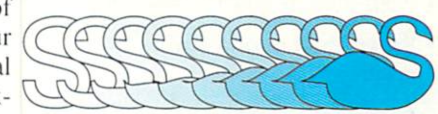


And since Professional Draw 2.0 is a structured drawing program, it will output your art, in full color, to the maximum resolution of your printer - no more "jaggies". Whether it's a dot matrix, an inkjet, a PostScript laser, or a 2400 DPI phototypesetter, Professional Draw 2.0 will take full advantage of its capabilities. It will even output four color separations. So now your graphics don't just look good on screen, they look good where it counts: on paper.

With Professional Draw 2.0, you have access to over a million colors. And our proprietary on-screen color dithering allows you to view a thousand colors on screen in hi-res.

Professional Draw 2.0 gives you a powerful assortment of geometric and free hand drawing tools - lines, rectangles, grids, ellipses, beziers, free hand, and even text. Reflect, rotate, shear, distort, and apply perspective to your text and graphics. Wrap text around any curve. Transform one figure to another varying color, line thickness, and shape, in arbitrary number of steps.

Professional Draw 2.0 comes with two structured fonts and is compatible with Outline Fonts from Gold Disk so you have access to dozens more. And, best of all, you can import your drawing into Professional Page and bring your desktop published documents to life!



So call Gold Disk, today, at 1-800-387-8192 and order your copy of Professional Draw, or stop in to see your local Amiga dealer.

Professional Draw 2.0 is just $295. Registered owners of Professional Draw 1.0 can upgrade to version 2.0 for $60.00. Please call Gold Disk at 1-800-387-8192. In Canada, (416) 828-0913.

This entire ad was produced and color separated using Professional Draw 2.0 and Professional Page. Black and white art work provided courtesy of AlohaFonts, Fair Oaks, CA.

GOLD DISK

Circle 177 on Reader Service card.

DESKTOP VIDEO

The first Complete Desktop Video Program



Then



Now

SHOWMAKER

Up until now, making a "Desktop Video" with your Amiga meant you had a very crowded desktop. You needed editing VCRs, single frame controllers, and a lot of money and patience. It just wasn't possible to record a finished video straight from your Amiga. You could create the animations, stills, sound effects, and music, but there was no way to bring it all together, and most importantly, to easily synchronize audio and video. Until now...

ShowMaker is the editing suite for all your work, offering compatibility with:

- Deluxe Paint III
- Sonix
- Photon Paint II
- LIVE!
- FrameGrabber
- MovieSetter
- Deluxe Music
- ANIMagic
- Music-X
- and more!

This should give you an idea of what the future holds for your Desktop Video productions. To get the full picture (and music and animation and titling), ask you dealer for a demonstration of ShowMaker, or call Gold Disk for more information.

Circle 150 on Reader Service card.

ShowMaker, the first with features like:

- Auto-sync of ANIMS and music*
- Smart load of one ANM while playing another*
- Built-in Video Titling for use over animation or live video
- VTR and LaserDisc control
- Genlock control

Circle 150 on Reader Service card.

GOLD DISK

For more information, visit your local Amiga dealer today, or contact Gold Disk at 1-416-828-0913

* Patent Pending

VOLUME 6, NUMBER 6 JUNE 1990

C·O·N·T·E·N·T·S



What you see above is definitely revolutionary (go Amiga 3000!) But it's evolutionary, *too. Commodore didn't just announce a new system; it presented a whole new strategy—for* all *Amiga users (as you will see in our feature coverage). With a new operating system (2.0), a multimedia authoring system, and a slew of other new products, there is indeed something for everyone.*

COVER PHOTOGRAPH BY ED JUDICE

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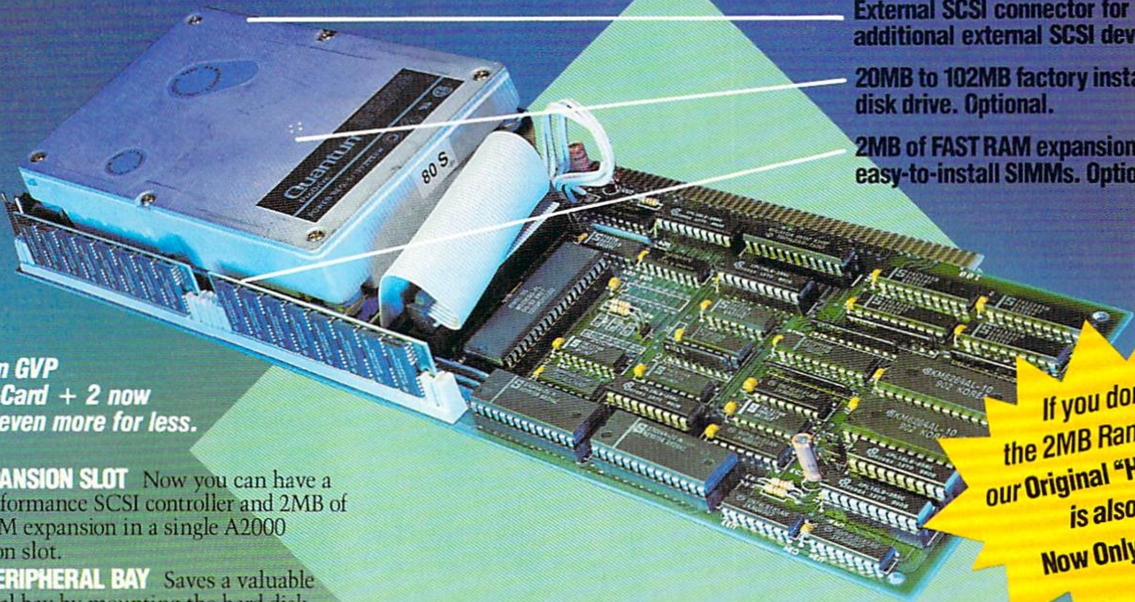
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Introducing GVP's $199.00 Spring Special*

THE GVP PRICE CHALLENGE

Order Today! Offer Available Through June 10, 1990.



If you don't need the 2MB Ram Expansion, our Original "Hard-Disk-Card" is also on sale: Now Only $169.00!!

The Proven GVP Hard-Disk-Card + 2 now gives you even more for less. Compare:

SAVES EXPANSION SLOT Now you can have a high performance SCSI controller and 2MB of Fast RAM expansion in a single A2000 expansion slot.

SAVES A PERIPHERAL BAY Saves a valuable peripheral bay by mounting the hard disk directly (flush) on the SCSI/RAM controller board.

PERFORMANCE With close to 10,000 Amiga hard disk controllers installed, our performance and reliability needs no further explanation. Our unique DMA direct to onboard 16KB buffer has received rave reviews around the world. Don't ask us, just ask one of our many satisfied customers! Very FAST AUTOBOOTing directly off a hard disk FAST FILE SYSTEM partition, is a standard feature.

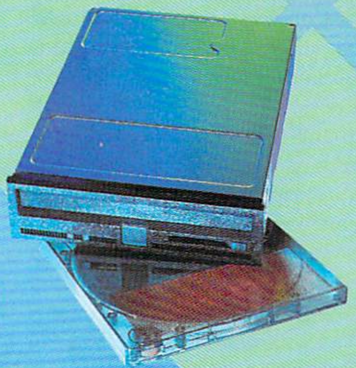
EXPANDABILITY By saving both a valuable expansion slot as well as a scarce peripheral bay, your Amiga retains maximum expandability.

FLEXIBILITY With our optional Advanced AUTOBOOT EPROMs, we fully support removable media devices (e.g.: Syquest and Bernoulli drives) with our unique "AUTO-DISKCHANGE" feature.

PRICE Priced less than most single function controllers. No matter how you look at it you get unbeatable value. Look at the 2MB FAST RAM expansion capability as an (almost) free bonus.

QUALITY All GVP products are backed by our full one year warranty.

Removable Hard Drive
44MB Removable Storage





IMPACT WT-150 Streaming Tape Backup

Experienced computer users know the importance of making regular backups. A typical 40MB hard disk will take over FORTY-FIVE 880K floppy disks to back-up. The job can easily take over an hour of repetitive disk swapping. There is a better way!

The NEW GVP IMPACT WT-150 Streaming Tape Backup product offers a high capacity (150MB), high speed, streaming tape drive bundled with probably the best and most flexible backup tape software utility in the industry. This incredible piece of software, which we have called ***TapeStore***,™ makes backups simple, interesting and exciting.

TapeStore can back-up and restore everything from individual files (File-by-File mode) to entire disk partitions (Disk Image mode). Support for the portable, industry standard, Unix tape format (tar) is planned for the near future.

TapeStore is designed for novices and experts alike: it can be run from the workbench or the CLI. It can be operated using a few simple mouse clicks for daily back-ups, or used to create archive tapes for transferring large amounts of information between machines. Anyone can supply a piece of hardware but ONLY GVP provides the TOTAL SOLUTION. Once again GVP has come up with a winner!

GVP

*$199.00 Special includes HC2 + Controller without drive and memory.

GREAT VALLEY PRODUCTS INC.
225 Plank Ave., Paoli, PA 19301

For more information, or for your nearest GVP dealer, call today. Dealer inquiries welcome.

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CHIEF CONCERNS

In the mines, in the mines, where the sun never shines . . .

THERE IS ONE office at *AmigaWorld* with a door that locks. It's kind of cave-like, with poor ventilation and a floor that shudders. But it's quiet and secure, and that's where we put Senior Editor of Technology Lou Wallace—his computers are worth more than the rest of ours combined, and they make a lot more noise.

Usually, not many people go into Lou's cave, but over the past several weeks the cave has been *the* place to be for the *AmigaWorld* staff. You see, we've been kind of like the jury in a big mobster trial. But instead of being *sequestered*, we've been under *non-disclosure*. (I guess it's sort of the same thing, really.) The reason is that the cave has been home to a 25Mhz Amiga 3000—the machine that answers the critics and sets the stage for a whole new family of Amigas—and now the word is out.

We've also been playing with AmigaVision, Commodore's new multimedia authoring system, doing silly things like building interactive movies. You can read more about this puppy later in the issue.

But first, let's back up a few years, say to 1985, when the Amiga was launched. At that time, it was clearly superior in capability and pure price/performance. Since then, however, Commodore has taken it on the chin for failing either to improve Amiga technology quickly enough or to promote the advances it did make effectively enough—especially given the fierce competition from IBM and Apple on both fronts.

That was then. The Amiga 3000 is now! It's fast, professional-looking, and has a 32-bit bus that cries out to the Amiga-loving universe, Expand me! Plus, there is an awful lot else going on with the A3000 announcement besides just a new machine. (See "Welcome To A New Generation!" on p.18 for full details of the Commodore announcement.)

With the Amiga 3000, the new 2.0 operating system, AmigaVision, spiffy new monitors and speakers, and a host of related networking products, Commodore is on the verge of gaining a whole new image. Forget game company. Forget has-been. Try *leader* in personal-computer technology.

Some may call it overdue. I simply call it a welcome sight. In this one set of announcements, Commodore has defined a good deal of the Amiga's future, and has made enormous strides towards bringing it into the mainstream. And the price of the Amiga 3000 (under $4000) is competitive, to say the very least.

The A3000's 32-bit architecture puts it squarely in workstation and high-end (read expensive) PC and Macintosh territory. With its flexible 32-bit bus, it is a machine that can take whatever cards you throw at it. At the same time, the Amiga—in all models and configurations—maintains its clear advantages in multitasking and in the large array of low-cost, sophisticated graphics, video, and animation applications available.

The networking breaks down any barriers to entering lucrative corporate and government markets. For Amiga users, it means we can tie into major networks and share information with people we want to share information with.

The Amiga 3000's Enhanced Chip Set (ECS) and V2.0 of the operating system provide a radical new base from which to generate all kinds of future technological advances. This is clearly only the beginning. Engineering is at a fever pitch. Look for the pipeline to fill up with a host of even more exciting new products in the coming months and years.

Commodore is even getting aggressive on more than technology; its marketing is getting downright wild. I expect the company to start naming names, calling Apple's and IBM's multimedia hype into serious question. Instead of ignoring the empty promises of these so-called market leaders, Commodore ought to be calling them out into the street to fight a multimedia battle that would make Lee Marvin proud. AmigaVision, which makes Apple's HyperCard look thoroughly wimpy, is a big part of the Commodore arsenal.

By themselves, the entire onslaught of Commodore announcements does not necessarily guarantee success. Quality dealers need to provide training, support, and service for these increasingly sophisticated products, and they must keep pace with the mainstream purveyors who hawk the wares of Big Blue and Big Red. The world at large also needs to see and touch the system in order for it to get the respect it deserves.

Commodore needs to follow up these announcements with reliable products that ship in a timely fashion. Most of all, let's keep things stirred up with another batch of new products. Arlo had it nearly right: "The time is right, the place is here; there'll never be a *better* year." ■



REPARTEE

Comments, complaints, and concerns from AmigaWorld *readers.*

UNCOVERED

Your 1990 Video and Animation Special Issue cover screams affirmation and entrenchment of all the wrong ideas perpetuated about Amigas and women. That anachronistic caricature of a "blonde, big-busted babe" hardly implies that the Amiga is a serious computer with awesome potential.

It is one thing to be personally offended, which I am, and quite another when offensive behaviour interferes with my work. I am in charge of an interdisciplinary multimedia interactive technology lab at Concordia University complete with nine A2000HDs, one 2500, a nine-monitor video wall, genlocks, and lots more. I have a problem you are familiar with: re-educating Mac and IBM disciples. Am I going to give academic professors *AmigaWorld* with the comic book cover and pretend to be serious? Finally, you publish an edition without a games emphasis and with lots of edifying content. Too bad I have to tear off the cover to circulate it.

Helen Bambic-Workman
Montreal, Quebec, Canada

ADS UP

In response to the letter from P.W. Hilley-Swank (Apr. '90, p. 8), I would like to weigh in on the side of Commodore's Amiga ad campaign. Hilley-Swank complains that the ads "violate every rule that a good hard-hitting advertisement would follow." But "good advertising" must match the message (as communicated through the look and feel of the piece) to the intended market, and slavish devotion to rules is as likely to confound the process as to aid it. As a graphic artist who has been working with computers for over eight years, I found Commodore's ads dynamic and intriguing, and from a professional point of view I was attracted to the art direction and design. It seems that CBM has played to the strengths of the computer. Congratulations to Commodore's agency for presenting the Amiga in a way that attracts the buyer they are aiming at. I now own an A2000.

John Prusinski
New City, NY

ENTHUSIASM FOR SALE

I have a small store in a small town. We sell music supplies including software and computers, and own an Amiga 2500 that we use to demo programs. I believe that the Amiga is the best computer on the market. When I asked Commodore about becoming a dealer, however, the company in effect told me it did not need my business; I would have to order $15,000 of equipment initially and sell that amount yearly. My computer sales amount to seven to 12 units per year—not much, granted, but at least half my sales could be Amigas. I am forced to sell from mail order houses, but cannot make enough money this way to justify it. I am sure other dealers are in the same position. If the Amiga is to survive, distribution is a must. The Amiga is still unknown, and until people can see its power and how easy it is to operate, it will remain unknown.

Banns Service
Elmo, UT

WHAT YOU NEED. . .

About nine years ago, IBM had a person who would address business people at seminars saying "I've got something that will make your work easier, make you more productive, and give you more time to conduct your business." He would then go on to show how the IBM PC, with applications like spreadsheets, databases, and word processors, could help them do accounting, organize information, and write letters. His approach was simple and *very* effective.

What is wrong with Commodore or an independent marketing group presenting the Amiga in a similar way? An A2000HD with a flicker-Fixer, multisync monitor, CAD software, and a plotter could be presented to architects and engineers. The same hardware with desktop-publishing and video software instead of CAD, and a Linotronic 300 in place of the plotter could be presented to advertising-industry pros. The catch phrase in computer sales is "value-added reselling." Business people will cheerfully pay full price for both hardware and software if they believe it to be a good investment in their future.

Gregory Benoit
Leominster, MA

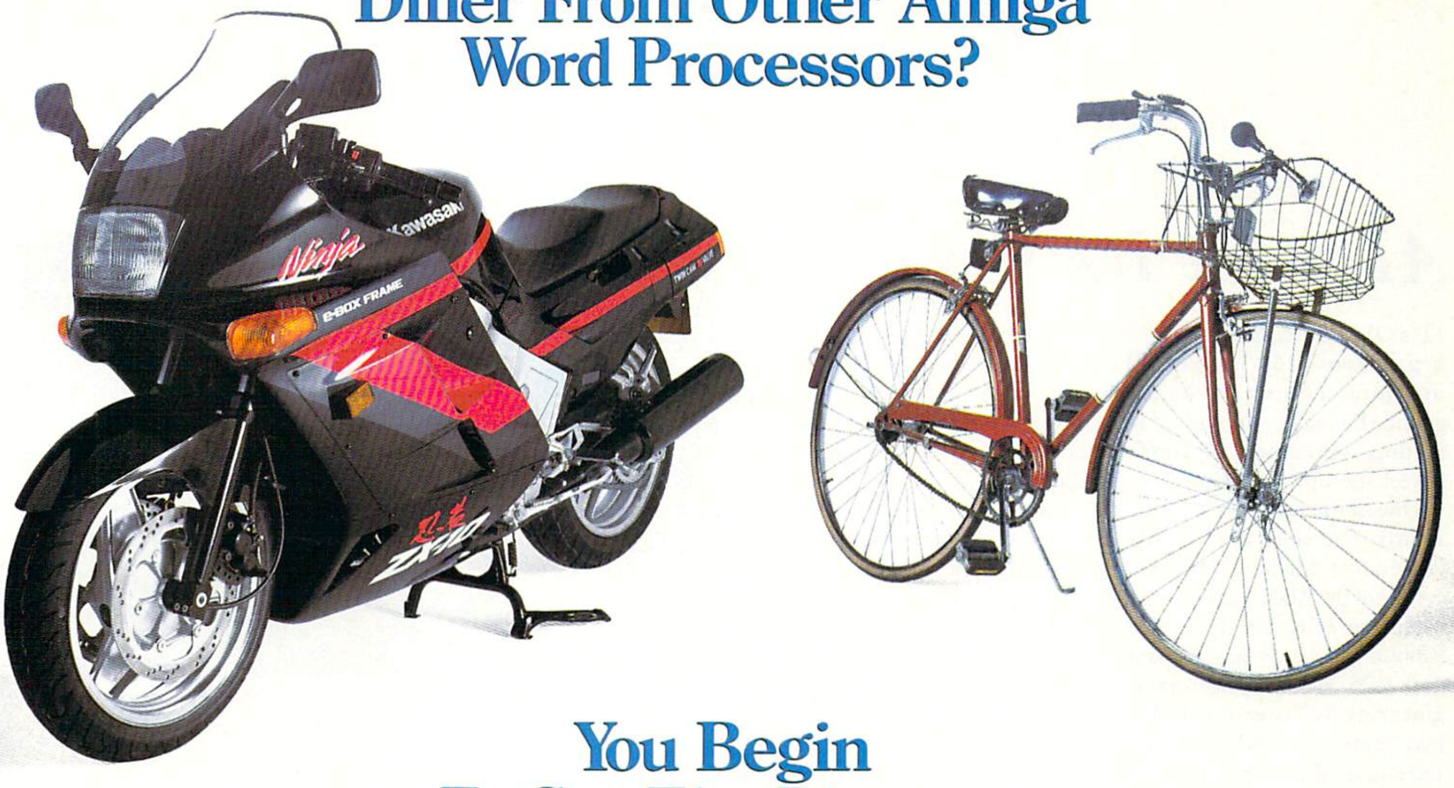
SEMPER FI SCI

In response to K.A. Ferguson's letter (Mar. '90, p. 8), I would like to mention that my company is dedicated to producing scientific applications for the Amiga. I would like to solicit suggestions from anyone interested in data graphing and statistics, and other such programs to write me at 969 Coventry Court, St. Louis, MO 63141.

John D. Clark

Send your letters to: Repartee, *AmigaWorld* Editorial, 80 Elm St., Peterborough, NH 03458. Letters may be edited for space and clarity. ■

How Does New ProWrite 3.0 Differ From Other Amiga Word Processors?



You Begin To Get The Picture.

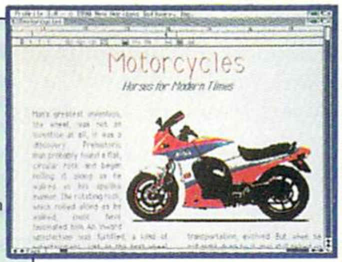
Beneath Its Elegant Design Lies A Word Processing Powerhouse.



Ease into the solid comfort of the ProWrite environment. Zip in your text and briskly format with intuitive menu and ruler controls. Now slip into high gear using the power of keyboard commands. Deftly cut, copy and paste on the fly, knowing the formidable 100,000-word spelling checker is checking as you type, and the vast thesaurus is standing by with over 300,000 cross references to fine-tune your ideas. Graceful multiple columns are at your fingertips with choice of snaking or parallel text flow. If you're really into performance, you can tackle tedious tasks with the touch of an F-key using macros. For you power users, the AREXX port awaits you. And ProWrite's print merge feature eagerly churns out those form letters.

So Intuitive, So Responsive, You've Got To Experience It To Believe It.

Your thoughts pour effortlessly onto the screen, then just as fluidly out to your printer, virtually unaware of anything between you and the printed page. (After all, what good are all those features if they're a distraction to use?) Even your swiftest typing can't outrun it. Wrap your text around a graphic and you're ready for the home stretch. Now it's time to print and you've got control over your printer's dot density, aspect ratio, and paper size. And ProWrite can print your printer-resident fonts with graphics in Pica, Elite, Condensed, and Wide—all on the same page. With ProWrite's flexibility, you can smooth out any rough spots—no matter what kind of printer you have.



With all these performance features and more, ProWrite stands in a class by itself as your power performer. And best of all, it stands on the shelf now at your favorite store.

Features

- Spelling checker with 100,000 word dictionary
- Spell check all at once or as you type
- Multiple columns with snaking or parallel text flow
- Thesaurus with over 300,000 cross references
- Print merge
- Import any IFF or HAM pictures
- Wrap text around pictures
- Multiple line headers and footers with Title Page option
- Macros, when used with AREXX
- AREXX port
- Hyphenate words with soft hyphens
- Tabs with left, center, right, or decimal alignment
- Defineable decimal tab alignment character
- Prints color or black and white printer-resident fonts and pictures at the same time
- Prints printer-resident fonts with any variety of Pica, Elite, Condensed, and Wide fonts at the same time
- Prints on any Preferences-based printer
- True "What you see is what you get" display
- Multiple fonts, sizes, styles, and colors
- Adjustable defaults for *all* program settings
- Comprehensive keyboard equivalents
- Select All command for document-wide changes
- Go to any page on command
- User-definable dictionary
- Up to ten documents can be open at once
- Undo and Redo commands
- Adjustable page sizes
- Print sideways or across paper perforation
- Print documents back-to-front, separate odd-even, or collated
- Line spacing in single, one and one half, and double
- Print to PostScript using optional PostScript module
- Adjust printer dot density
- Adjustable top, bottom, left, right, and binding margins
- Reduce or enlarge documents in one percent increments
- Adjust line spacing in one point increments
- Automatic space before and/or after paragraphs
- Automatic word look up
- Automatic page numbering with choice of five different formats
- Sort paragraphs from A to Z or Z to A
- Character, word, sentence, line, paragraph, picture, and page counts
- Six different date formats and two different time formats
- Computes average word and sentence length and readability grade level
- Insert current date and time either as fixed text or as an updating marker

Circle 38 on Reader Service card.

NEW HORIZONS

First In Personal Productivity And Creativity

New Horizons Software, Inc.
206 Wild Basin Road, Suite 109, Austin, Texas 78746
(512) 328-6650

NOTEPAD

Compiled by Barbara Gefvert Tyson

ADA on Its Way

IT'S OFFICIAL. ON March 15th, a day before the Spring AmiExpo began, some 130 people gathered in Washington, D.C. for the inaugural meeting of the Amiga Developers Association (ADA), a group that will benefit us all by communicating directly with Commodore, spreading the Amiga gospel, and, hopefully, enticing a few of the unwashed into the Amiga fold.

One of the first orders of the day was the election of an Executive Board. The votes called forth a truly impressive and enthusiastic leadership. Michael Halvorson of Impulse, who originally conceived of the ADA, was elected Chairman. Also voted in were Andrea Geiger of Telmak as First Vice-Chair, Melissa Jordan Grey of Blue Ribbon Bakery as Second Vice-Chair, Rick Rodriguez of Miavision and VRS Media as Secretary, and Bruce Benesh of Applied Engineering as Treasurer. Following the election, *AmigaWorld*, which had gotten the ADA ball rolling, handed the reins over to the Executive Board members, who will henceforth have complete control of the association.

Commodore's participation gave the meeting a big boost. President Harry Copperman outlined the firm's new directions and took questions from the audience. Jeff Scherb, head of Commodore Applications Technical Support (CATS), also spoke, and expressed a great willingness to work with the ADA.



Leaders of the pack: (l to r) ADA Secretary Rick Rodriguez, First Vice-Chair Andrea Geiger, Chairman Mike Halvorson, Second Vice-Chair Melissa Jordan Grey, and Treasurer Bruce Benesh

Although non-developers (users, dealers, journalists, etc.) are invited to join as associate members, the ADA has not determined what associate membership entails in terms of voting rights and so on. Non-developers are, however, certain to occupy seats on the Board of Directors. At press time, the next meeting is unscheduled, and a dues structure remains to be set, but according to Halvorson, the ADA will publish a position paper and begin a push for more members. Stay tuned for details. *—DB*



The Pro Shows

TODAY'S UP-AND-coming Amiga user is working on professional graphics and videos, needs lots of storage space, and wants to network. At least that's what the exhibitors at the Spring AmiExpo in Washington, D.C. are banking on.

Judging by the popularity of the animation, graphics, video, and multimedia seminars, the developers' bets are safe. On the show floor, Cryogenic and Impulse delivered with new 3-D modelers—*3D Professional* and *Imagine*, respectively. Both promise an intuitive interface, animation, and 24-bit rendering. The phrase "24-bit" also surfaced to describe images produced by *DCTV*, Digital Creations' new slow-scan digitizer that lets you display and manipulate composite images.

Three companies offered high-capacity storage solutions. Computer-all showed *Tidal Wave*, a 650MB read/write removable-media optical drive that promises to support most SCSI interfaces. Sony and Active Circuits displayed an *optical drive* with similar specs. Impulse's *Mega-Drive*, also SCSI-compatible, boasts 600MB of rewritable, removable optical storage.

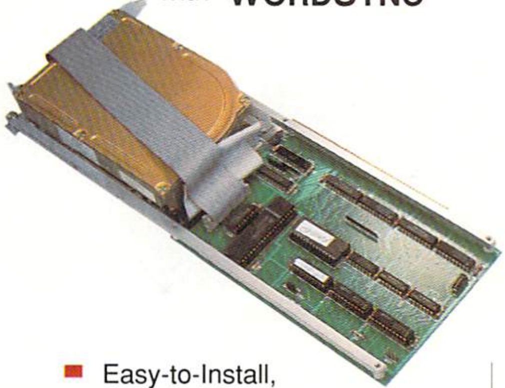
Where would you use such a drive? In a network! DigiFeX's hard- and software combo, *Net Utilities*, lets your Amiga act as a node or server in an AppleTalk-based network. Ethernet hardware from ASDG—the *LAN Rover* board—will be bundled and sold with Syndesis' DECnet software, *TSSnet*.

While some *AW* staffers were exploring AmiExpo, our chief was jetting off to Hannover, W. Germany for the CeBIT Computer Fair. Here too, the professional-applications theme prevailed.

Commodore's huge booth bustled. Advanced Computer Design of Bremen, W. Germany ran a *DECnet X Windows system* (a graphic interface for Unix) on several Amigas all tied to a Digital Microvax. A hot feature from Videocomp of Frankfurt was *transputer technology*—a system capable of creating animations that rival those of the vastly expensive Pixar systems. Among many video products was a *remote camera-control* system from Panasensor—just the thing for filming miniature models and special effects. Watch our column, "What's New," for details on these and other new products. *—LJB and DB*

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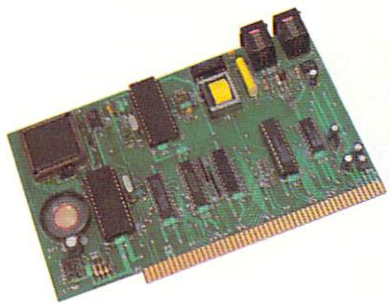
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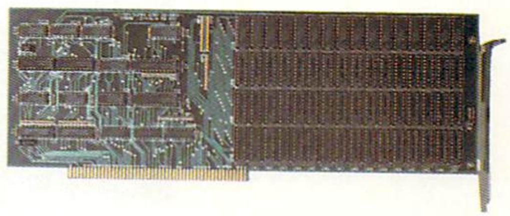
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REVIEWS



Odd-numbered frames 3–19 in a 19-cell font animation give you an idea of how the beveled Bullion font (above) rotates into

AnimFonts 1 & 2

Write flashy, moving prose

By Gary Ludwick

YOU CAN EXPECT ooohs and aaaaahs when AnimFonts sweep onto your video screen. Kara Computer Graphics, designer of excellent typefaces for use in Amiga video titling, has a new line of animated fonts in eight-color hi-res Colortext format. The words you create with these fonts appear to move not only because characters roll onto the screen, but also because a ray of light glances across the reflective typefaces. There are some limitations, but essentially AnimFonts give your home videos and animations a look that has been limited to high-priced productions.

AnimFonts 1 is a chrome-look script in both upper and lower case that writes itself onto the screen in flowing, cursive style. AnimFonts 2 is a beveled gothic metallic face (caps only) that is animated on the vertical axis: Letters rotate 90 degrees from an on-edge perspective to full face. Each volume contains both the animated font library and a standard type face. The animated gothic font contains 20 cells for every letter. The script face has a varying number of cells per character, but the cells of different letters are matched exactly for smooth, coordinated motion.

The Choreography

You begin by composing your title screen from within any paint or animation package that supports the animbrush format. Using the standard font, type in the words, then kern and position them. This master title screen is the template for your animation. To compose the animation, you lay down individual letters from the animated font library, one at a time, onto a spare screen. Just call up the animated character you need and use the mouse to align the animbrush letter over its corresponding letter on the master screen. Then, holding the mouse very still, switch to the spare screen. Because the animated letter loads showing its final frame, you must remember to press the 8 key to return it to its starting cell before stamping it in place. Now repeat that process for every letter in your master title.

That's not necessarily all that is involved. Let's say, for example, that you want your second character to begin its animation when the first is half way through, and so on. In DeluxePaint III (Electronic Arts), you must reset the total number of frames in your animation (via the Anim Frames Set gadget) every time you place a letter. For the gothic face, the first character you put down requires a frame count of 20, but you must reset the count to 30 before bringing in the second letter. (The second character's animation would begin at 11 and end at 30). For each character you must not only reset the total, but also compute its starting frame (always 11 frames from the preceeding character's start point in this example).

Sound complicated? It can get confusing, and miscalculations—either in frame counts or letter positioning—can force you to start over. DeluxePaint's Coords On command helps positioning as you transfer from master screen to spare screen, but the mouse is sensitive to the slightest movement, and should you stray from the original coordinates, getting back to them can be frustrating. Using AnimFonts in DeluxeVideo (Electronic Arts) is even more complicated.

Varied Steps

Included with each font are alternate palettes that allow a variety of looks in



YOUR TURN!

AnimFonts are beautiful. I have become somewhat jaded about software, but AnimFonts hit me as being very original and well put together. In my work, time is critical; it's nice to have a product like AnimFonts that I can rely on. The manual contains specific instructions for using the fonts with popular programs. I like the fact that there are standard fonts on disk in addition to the animated ones.

—*Andrew Timmins*
Santa Clara, CA



view while the cursive-style ChromeScript (below) flows onto the screen.

both color and surface. According to Kara Computer Graphics, each has been tested on waveform monitors and vectorscopes for quality videotape transfers. My experience in putting these fonts on tape confirms that claim.

AnimFonts are not point-and-click simple; they require work and a lot of practice for good results. But the effects are first class. When the letters move onto the screen, and the glistening sheen moves across the words, the impression is professional. Unfortunately, the documentation doesn't measure up. While adequate, it would benefit from more depth and a clearer presentation style. When you are learning a complicated procedure, it's easy to get lost in a paragraph that contains four or five separate instructions.

AnimFonts delivers professional titling effects you can't get from any other package. The payoff in impressive graphics overcomes both the initial complexity in learning the program and the shortcomings of the instructions.

> **YOUR TURN!**
>
> AnimFonts are good. I was using the regular Kara Fonts for animation, and this package makes the process a bit easier. Once you know how, working with the fonts is pretty easy, but I think more people would use them if the package were easier to learn.
>
> —*Larry Mays*
> *Queens Village, NY*

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Culver City, CA 90230
213/578-9177
$49.95 per volume
1.5 megabytes required.

VoRecOne

Just ask your Amiga

By Joel Hagen

A FRIEND DROPPED in to see what I was doing with my Amiga. Picking up a microphone, I said, "Hello, computer."

To the amazement of my friend, the Amiga's synthesized voice responded, "Good morning, gentlemen. What may I do for you?"

"Information," I requested.

"Here is the status of your drives," the computer announced, while displaying the results of an INFO command to the CLI.

"Pictures on df1," I commanded.

"Very good," it replied, "Which picture on drive one would you like to see?"

"Saturn ring spokes," said I, and moments later we were looking at a beautiful Voyager image.

I was amazing my friend with VoRecOne, a hardware/software voice-recognition system. I like VoRecOne, but I see it as an experimenters tool, and feel it should be reviewed in that frame of mind. If you require completely predictable results, VoRecOne is probably not for you.

Hear Here

The hardware is a box the size of a soap bar that plugs into the second joystick port via its ten-inch cable. The software is a single, bootable, non-copy-protected disk. The standard microphone that comes with the package plugs into the VoRec box.

VoRec allows voice interaction with the computer. Before you can use the system, you must train the computer to recognize key words, and match those words with commands. Then, instead of typing INFO into the CLI, for example, you can say the word "information" (or "abracadabra," for that matter) to get the same results. VoRec samples the sound of that spoken word and compares it to the sound profiles of all the words you have trained it to recognize. Finding a match, it executes the command you have associated with that sound. In this case, the results of the INFO command can be displayed to the screen while the computer acknowledges your input using the SAY command. ►

In theory, VoRec can do just about anything you can do from the keyboard. It comes with a good, utilitarian language, including a SYSTEM command which executes Amiga command strings as though they were typed in a CLI window. The language also includes conditionals, screen and graphic commands, string input, mouse and key emulation, and more. If you hate the idea of learning a language, don't worry. Even two or three simple commands can provide complex interaction with other software. For example, the VoRec command, KEYSEQ "p", emulates hitting the "p" key. Associated with a spoken word, it would call up the palette if VoRec were multitasked with DeluxePaint III (Electronic Arts).

VoRec contains two main programs, Voice and Recon. Voice is the program through which you edit scripts and train the vocabulary. Recon is like a player program, and will usually be the program you multitask with other software for voice control. The illustration shows the Voice program interface with a script loaded. Words to be trained are entered on the left, and their associated action commands are entered on the right. The interface is simple and works well. To train a finished script, you hit the F4 key and a window instructs you to say the first word. You are prompted to repeat the word a second time. This continues for each word in turn until VoRec has been "trained" to recognize them all. The script can then be saved as a file to be run by Recon for voice interaction.

Voice recognition even on more sophisticated systems is experimental and imperfect. With VoRecOne, you may never get total recognition of your trained vocabulary. The manual claims a success rate between 50 and 100%, and that matches my experience. VoRec's tolerance for deviations in intonation, pitch, stress, and duration of phonemes is limited. Best results will rely on your ability to mimic your original input. If your voice is foggy in the morning, VoRec's recognition will be poor on a file trained the previous afternoon. Also, words with similar phonetic structure, like "cut" and "quit," may confuse VoRec.

The larger the vocabulary you use, the



On the left: words to be trained.
On the right: action to correspond.

greater the chances of recognition confusion. In a complex script, a few weak links can render an otherwise powerful utility useless. My best results have been with vocabularies of fewer than a dozen words, all dissimilar. Under these circumstances, I can get close to reliable recognition, although I may need to retrain before each session.

SAY "ZEN"

The manual does a good job of documenting the VoRec language, and any novice should be able to follow the basic tutorials. There are mistakes in the advanced tutorials, however; I was able to discover and correct these with a little experimentation. You can ignore statements in the manual about demos printed in the back, and about scripts being used in later tutorials. These must have been plans that didn't materialize. Sometimes, the only explanation of a major feature like Expand or Shrink is buried in a tutorial, and otherwise not indexed. I never did find documentation of the Merge function. There is no fundamental explanation of what the Recon program is, and nothing in the manual explains that it can be multitasked to control other software. If you take a sort of zen outlook on the manual, you can enjoy the somber admonition on page 3 about reading it cover to cover, and the unconscious irony of lines like, "chances are that not all things in this manual will make sense..."

Be prepared for lots of little problems. VoRec autoboots to a Workbench screen, but the tutorials in the manual will crash the system if they are run from Workbench instead of the CLI. A Workbench icon called IMPORTANT README is there to alert you to this problem, but the icon does not know where its text reader is, and therefore cannot show you the file. The manual and the Impulse support line told me that to add VoRec to other software, I need only add Voice or Recon, my trained files, the recognition.library and the listening.device. Adding these files to DeluxePaint III and Digi-Paint (NewTek) crashed the system every time I tried to run Recon on a file containing only KEYSEQ commands. Through annoying trial and error, I found that if I also added the narrator.device and the translator.library to the disk, all was well.

Apparently, VoRecOne was rushed out the door. A computer novice might be baffled by the errors and omissions in the documentation and by the Catch-22 disk philosophy. VoRec might have found an intolerant market on another system, but Amiga users are usually open to idiosyncracies if the results are interesting. In that spirit, VoRecOne is a fun product. I am having a great time with it and have many ideas I want to try. Its greatest value may simply be for exploring the fascinating field of voice recognition at a bargain price.

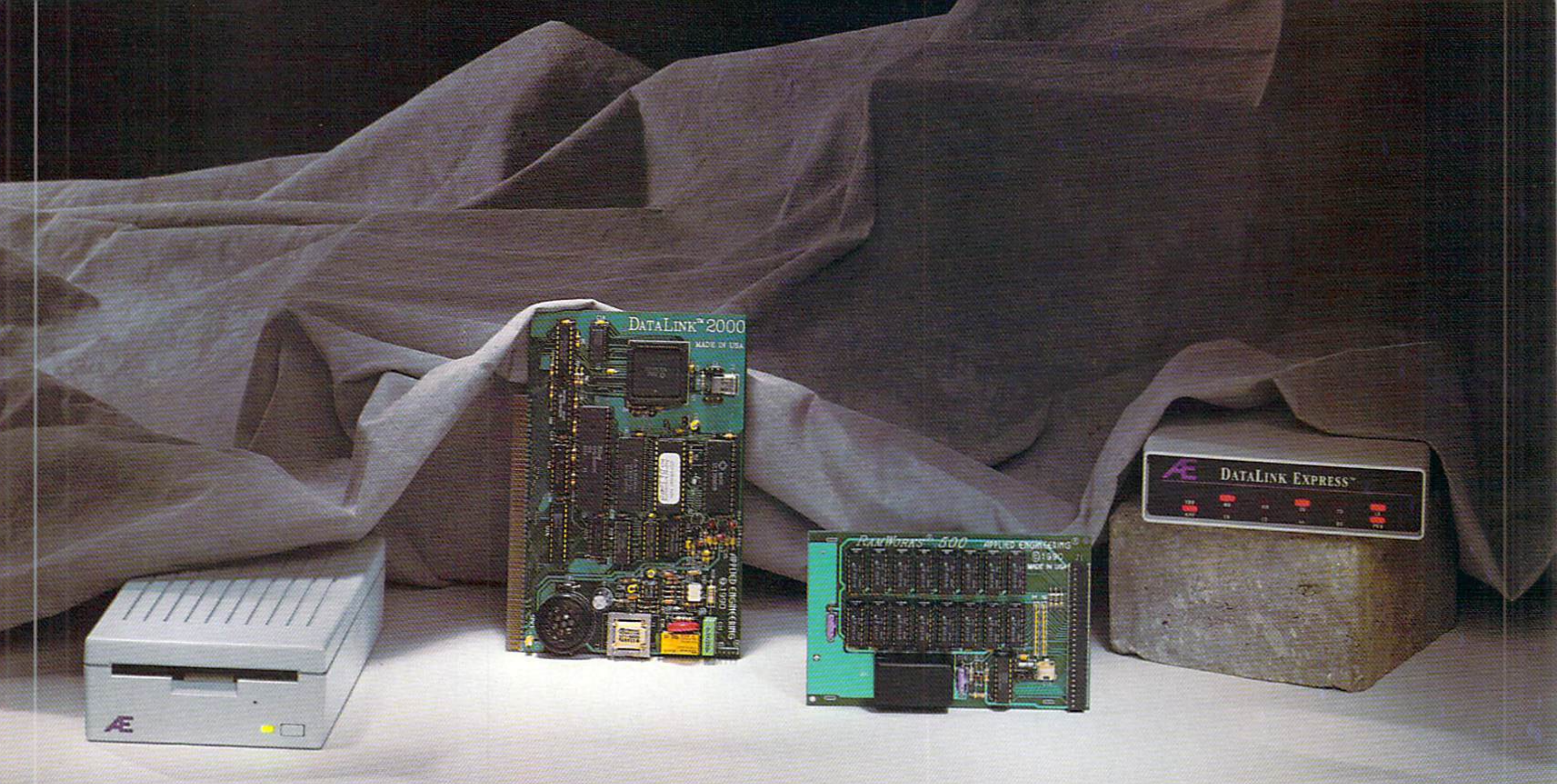
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No special requirements.

PAGESETTER II

A revised edition of a favorite publisher

By Chris Diskman

PAGESETTER WAS WELCOMED several years ago as the first true Amiga desktop publishing program. It provided text-and-graphics integration through a WYSIWYG (What-You-See-Is-What-You-Get) interface, but did not measure up to programs available on other platforms. Its most glaring deficiency, lack of ►



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support for PostScript printers, relegated users to the church-newsletter quality of Amiga bitmap fonts. Gold Disk, the add-on program released for outputting PageSetter files in PostScript format, is awkward to use and does not fully support such printers.

When big brother Professional Page (which shares PageSetter's interface and methodology) arrived, it immediately dominated the high-end market. Poor old PageSetter has appeared increasingly creaky over the years, but in its newest incarnation, the program provides a subset of Pro Page's capabilities.

ON THE FONT LINE

PageSetter II still lacks PostScript support, but now provides Pro Page's Compugraphic scalable font technology. This is good news for publishers who do not have PostScript printers but need better quality output than that allowed by Amiga bitmap fonts. Compugraphic versions of Times Roman and Helvetica faces are supplied with PageSetter II, and more are available from Gold Disk (at $200 for 35 fonts).

The beauty of the Compugraphic approach is that it creates versions of the face optimized for both your screen and output device. Thus, the output with an HP LaserJet printer will be better than with an Epson dot-matrix. Besides that, the screen fonts are far superior to the standard Amiga bitmap variety, even on a non-interlaced display. The bad news is that effective use of this font technology requires a healthy amount of both memory and hard-disk space.

YOUR TURN!

I like PageSetter II better than the original version, and it's easier to work with than Pro Page. I especially like the pattern-fill option for lettering and boxes. I wish there was an option for creating drop-shadow boxes, though. I find that the smaller Compugraphic fonts do not print consistently. I did buy the extra fonts disk, but have gotten an error every time I've tried to load them. Still, I'm very satisfied with the program. For non-professional uses, it's just as good as Pro Page.

—***David Johnson***
Jacksonville, FL

If you use a number of type faces, be prepared for frequent work interruptions; every time you select a Compugraphic font, PageSetter II must create a screen version of it in the point size specified. By allocating extra memory or disk space to hold these constructed screen fonts you can minimize the interruptions (the fonts are saved to disk when you exit the program). Thus, both ample hard disk space and memory in addition to the one meg required to run the program are advantageous.

You can still use Amiga bitmap fonts with PageSetter II (just run the included utility program), but because they look

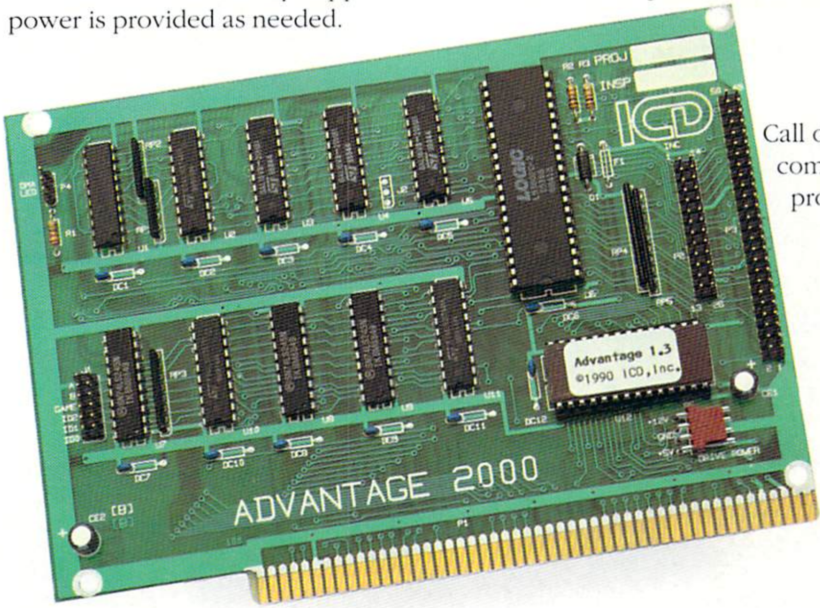
Continued on p. 76

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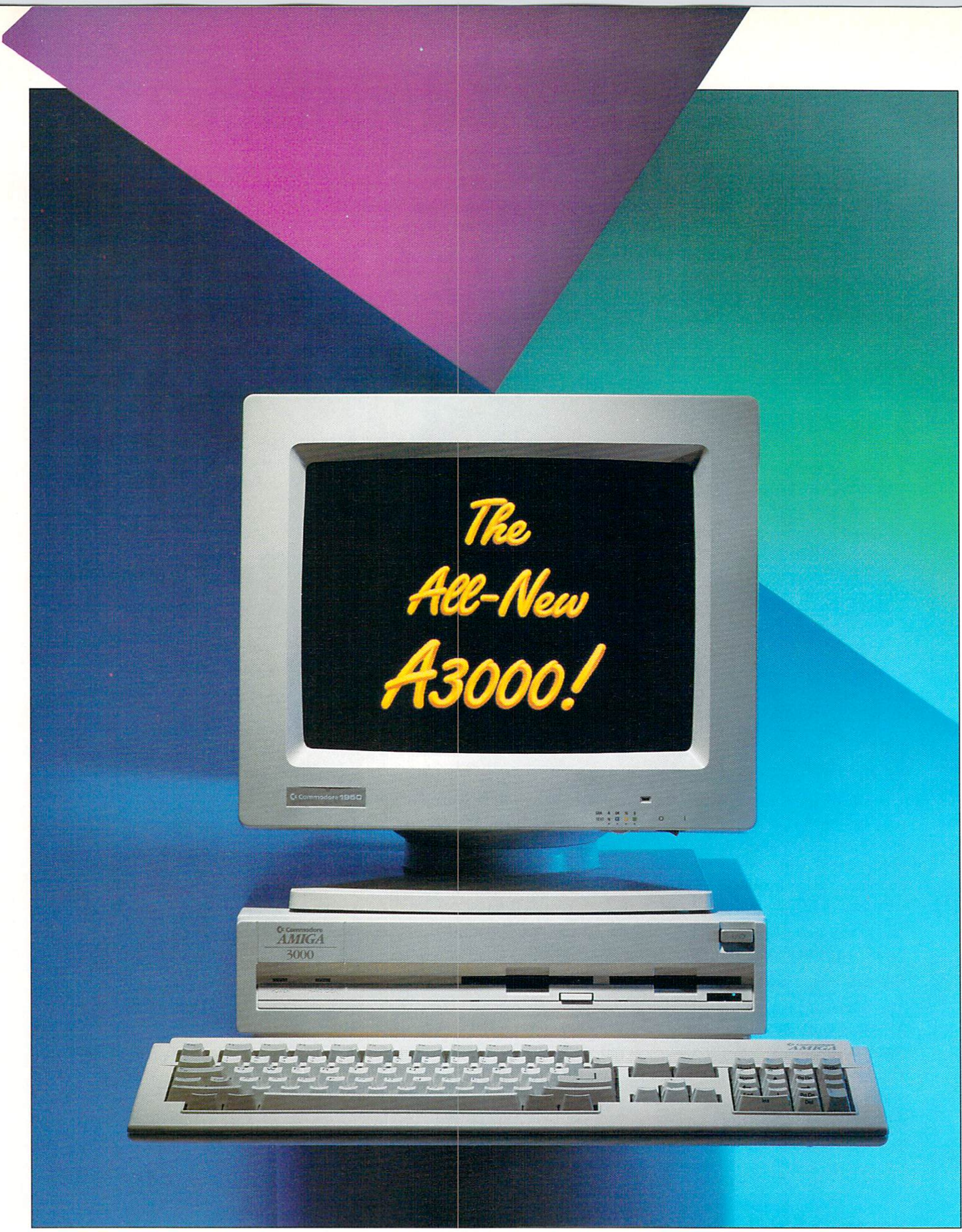
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PHOTOGRAPHED BY ED JUDICE

Welcome to A New Generation!

With its announcement of the A3000, version 2.0 of the operating system, the AmigaVision authoring system, and a host of supporting products, Commodore has unveiled the platform from which it plans to launch an entire new era of Amiga computing in the '90s.

NEW YORK CITY—Item: Giving its regards to Broadway, the A3000 *finally* made its appearance. While society debutantes had their traditional spring comings-out all over Gotham—at the Plaza, the Pierre, the Waldorf (but *not*, we expect, at the Helmsley Palace), the Amiga 3000 made its eagerly anticipated debut at a slightly seedy-looking former movie theatre on E. 14 St.

While the Union Square area may seem a wee bit unsavory, our ex-cinema turned out to be the fabled Palladium—a perfect setting for the marvelous multimedia show framing the A3000 announcement. With several hundred members of the press and Amiga community in attendance, Commodore set forth broad plans for future Amiga development on many fronts.

Also present, and next to the podium to help journalists from far and near gauge the full significance of all these announcements, was this same issue of *AmigaWorld*—under wraps at our printers until the day before the launch. A number of *AW* staffers spent much of the last three months interviewing Commodore engineers and independently evaluating new Amiga products to bring this very special and timely report to our readers.

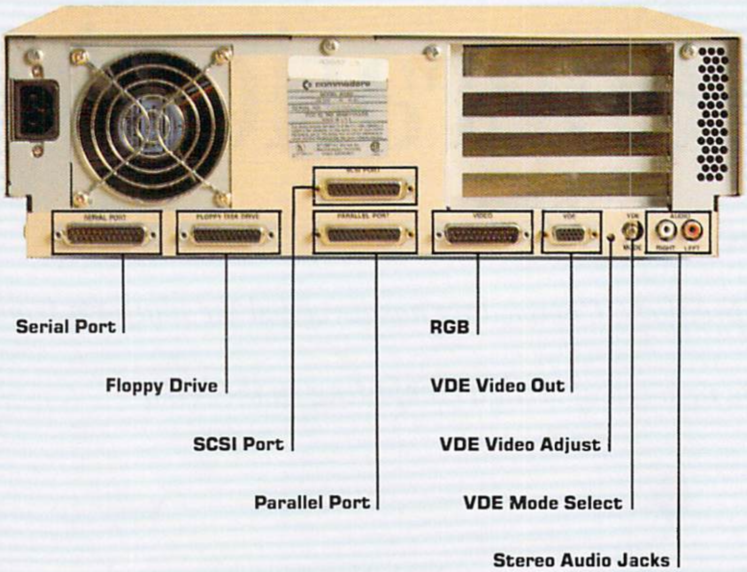
So, Big Boy, is That a PR Script in Your Pocket, or Are You Gonna Tell Us Something?

Yes, Mae, we think we found out enough to earn an invitation to come up and see you—right away! The brand-new Amiga 3000, equipped with quite a hot new engine and lots of fancy accessories, also came with a new operating system (V2.0), the much talked-about AmigaVision authoring system, a fresh batch of nifty monitors and speakers, and some much appreciated networking devices.

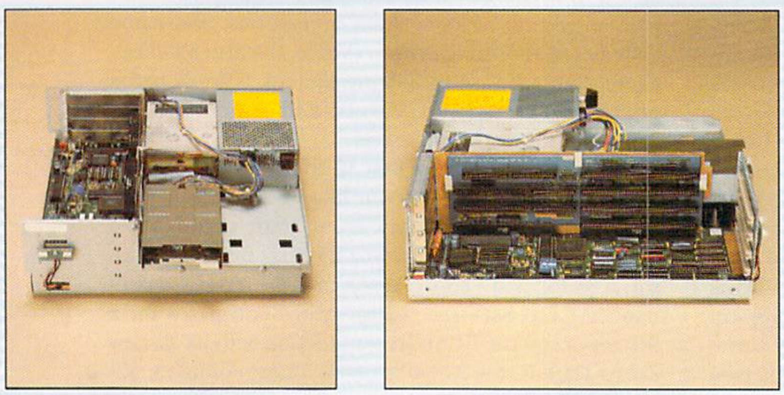
In case you got your first wind of all this directly from New York from someone like Jimmy Breslin (and couldn't decipher "oh-toidy" from "toidy-two bit"), the Amiga 3000 sports a Motorola 25 MHz 68030 processor, a 68882 math coprocessor, and the new ECS (Enhanced Chip Set—see "Chips Ahoy!" on p. 29 for a full report on the ECS). In conjunction with its all-new Zorro III bus, the A3000's 68030 offers complete 32- ►

By Doug Barney, Dan Sullivan, and Louis R. Wallace

bit processing power—with 32-bit registers and true 32-bit address and data buses. The system comes with 2MB of RAM (one megabyte of fast RAM and one megabyte of chip RAM, although it *can* address two megabytes of the latter if you wish to add the extra meg). Total memory—and this is staggering—*could* be expanded up to 1.7 gigabytes (that's *1700* megabytes, Mr. Nathan Detroit!). In addition, the system comes with a built-in SCSI DMA hard-disk controller and a 40MB or 100MB hard drive.



Rear view of the A3000.



Front view (left) shows internal floppy and hard drives, while side view (right) shows vertical Backplane and section of Motherboard.

The 25 MHz/40MB configuration sells for $3999. A less expensive ($3299) 16 MHz/40MB model with a 68881 math coprocessor is also available. The 25 MHz/100 MB model goes for $4499.

The supporting cast at the Big Apple announcement was no mere collection of bit players, either. The long-awaited update of the 1.3 operating system (earlier dubbed 1.4) finally became much more than just a "revised" version—hence the 2.0 designation. (See the sidebar "Radical Operations: V2.0" for a close look at the new OS.) A large and very exciting boost in an area where the Amiga already shines comes in the form of AmigaVision, CBM's new object-oriented authoring system. Almost anyone can now create multimedia applications/presentations using a point-and-click, icon-based language. (See the sidebar "AmigaVision: A Real Sharp Shooter" for more on the authoring system.) Plugging a big gap in the Amiga repertoire, Commodore also shuffled a few networking cards into the act for the multiuser crowd (see the sidebar "Not Just a Node Anymore"). Also on view were a couple of spiffy monitors (the A1950—a 14-inch multiscan color display; and the A2024—a 19-inch black-and-white hi-res [up to 1008 × 800] display) and some new stereo speakers.

OKAY, LET'S CUT TO THE CHASE. . .WHAT DOES THIS ALL MEAN, ANYWAY?

Although its 68030 technology is neither brand new nor exclusive, and its ECS and V2.0 will work on any *existing* model but the A1000 (but see "Chips Ahoy!" on p. 29 for some A1000/ECS work-arounds), the total package encompassed in the A3000 announcement makes it the most important advance in Amiga technology since the introduction of the original system in 1985. The keys are the significantly enhanced overall performance of the present machine *and* its sheer expandability for future development.

Looking ahead, the A3000's architecture and the revolutionary nature of its new operating system will provide the basis for expansion and new development for years to come. For right now, its vastly improved I/O makes the A3000 the most powerful, fastest production Amiga ever.

The key to increased performance is the new Zorro III 32-bit bus. Zorro III builds upon the strengths of Zorro II—particularly its ability to handle multiple processors. This is the so-called bus-mastering feature, whereby additional processors can take over the bus without going through the CPU. In addition, of course, the A3000's CPU itself can use full 32-bit *data* paths to chip RAM, fast RAM, the SCSI DMA controller, and the system ROMs.

Perhaps even more significant for future expansion, a vital difference with Zorro III is that now the "bus masters" mentioned above will work with a full 32-bit

The All-New A3000!

bus. That means that high-performance chips will not be hindered by a 16-bit bus. Presently under development and expected by the end of the year, the Motorola 68040 (which will run at 15-25 MIPS) will be able to run at full speed on the A3000. The same is true for high-speed graphics and numeric processors, as well as for RISC chips and cache memory.

All this points out the A3000 as a formidable platform for future development, as well as a powerful system of the moment.

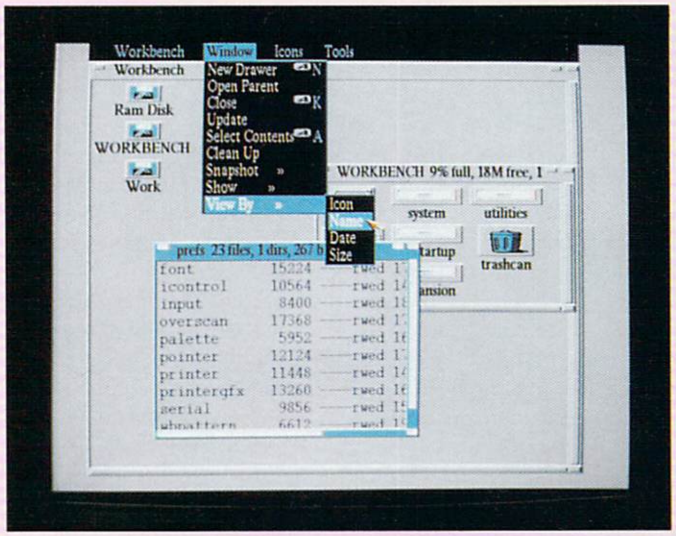
Holy Cow! Look at the Heat on That Pitch!

Right, Phil, even without these fascinating expansion possibilities, the A3000 is a pretty hot machine for a system whose sticker price is under $4000. It is sleek ►

Radical Operations: V2.0

THE 1.3 AMIGADOS Operating System (OS) was an evolutionary change from earlier versions. Sporting several improvements and a few bug fixes, it made the Amiga a more stable computer to use. Like well-worn blue jeans, the 1.3 OS was more comfortable, but not exciting.

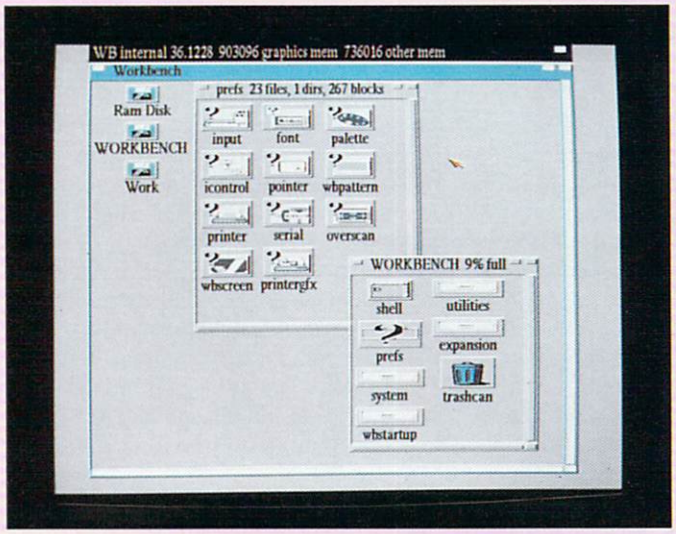
If you expect the same from Commodore's latest revision, be prepared for some big surprises. The most dramatic alterations since the Amiga software's initial release are on their way—changes so revolutionary that the new version cannot be called just 1.4. Instead, Commodore is dubbing the radically new AmigaDOS "Version 2.0."



Under 2.0, Workbench no longer needs an icon in order to access and/or execute files.

Bench Bashing

One of the major criticisms of the Amiga has centered around Workbench: The lack of consistency in applications makes learning new programs unnecessarily difficult. In response, Commodore has created several standard toolkits for programmers designing Intuition applications. The Gadget Toolkit supplies a simple way of creating and using the standard system gadgets in program, while the ASL library provides standard file and font requesters and a list manager. Commodore hopes that by supplying these types of basic operations it can introduce a consistent look and feel for applications.



Preferences has been replaced by a drawer with many modules that control specific functions.

Another aesthetic objection has been the overall appearance of Workbench itself. While quite functional, Workbench 1.3 lacks much of the style and polish associated with other Graphical User Interfaces (GUIs). Version 2.0 gives Intuition an embossed 3-D appearance that compares favorably with GUIs on other computers. Artists redesigned almost all aspects of the Workbench display (windows, gadgets, and icons) to give it a very strong, graphically impressive interface.

Behind the pretty face, Workbench 2.0's features and performance have been greatly improved as well. Drawers open faster and are easier to create (no longer must you slowly copy the Empty drawer), and new mouse and menu options let you quickly select multiple icons. ►

and small, has 68030/68882 processing power and 68851 MMU memory-management capability, boasts true 32-bit architecture, and sports 40–100MB hard-disk storage capacity with a built-in SCSI DMA controller. In addition, it contains a built-in display enhancer (which, reportedly, will sell separately in the future) comparable to MicroWay's flickerFixer to reduce scan lines and interlace flicker. ►

Because many Workbench operations are now asynchronous, you can start one and immediately begin another. For example, you can now start loading a program, then switch to copying a file. Similarly, you can cancel operations while they are still in progress, meaning you do not have to wait for a complete directory display before closing a drawer. Instead of an all-in-one program, Preferences now consists of several modules, each dedicated to a specific task. This approach leaves Preferences flexible and open to future additions. Perhaps the single best improvement in Workbench is in pure functionality. No longer the poor stepchild of the CLI, Workbench 2.0 can perform any function the CLI can, including executing CLI commands.

Dedicated command typists also have plenty to look forward to. For example, Commodore improved pattern matching and recoded all the C: commands in C, making many much faster than in previous versions. The Shell now offers more built-in commands, and the CON: window sports new cut-and-paste functions, a scrolling command history, and an optional PET-style screen editor.

AREXX. . .PLUS!

In response to many pleas and suggestions, Commodore incorporated ARexx into the standard system software. This one addition greatly enhances the effectiveness of the Amiga's already outstanding multitasking environment. Now totally unrelated programs will be able to use the ARexx ports to access each others' features, giving even more power to user applications.

To further increase performance speed and flexibility, 2.0 supports multiple RAM drives, a faster Trackdisk device, and FastFileSystem in ROM. The latter is especially important because it allows floppies, as well as hard drives, to use the FastFileSystem for speedier disk access.

On the programming front, CBM added a better autoconfig strategy, memory allocation, and task management to the Exec. Exec will now detect if a 68030 processor and 68882 math coprocessor are present, and if so will enable burst mode. Further down the road, Commodore plans to support Virtual Memory via Exec.

The new Math IEEE Single-Precision library will use the 68881/68882 math chips automatically if they are present. With this faster, single-precision IEEE math package, programmers will be more inclined to use the IEEE libraries instead of the MathFFP. By doing so, they will still get reasonable performance from systems without math coprocessors, yet will be able to offer support for the math chips, just in case.

On the graphics side, Intuition and the Graphics libraries hold a great many new features. Besides the previously mentioned window and gadget changes, Intuition now includes more support for custom gadgets, new string gadgets with enhanced options, direct support for overscan screens, scrolling, autoscrolling, and public screens. Additional enhancements include bitmap scaling, ColorFont support, and faster text rendering. Scaling is not limited to plain bitmaps, however; the DiskFont routines will scale font bitmaps—meaning the system will resize bitmap fonts to any dimensions you request. While a welcome addition, this is not the same as the true scalable Compugraphic font technology in Professional Page (Gold Disk). Have patience, CBM does plan a post-2.0 upgrade that will have true scalable fonts and support the same fonts as Professional Page. Of course, all the new display modes and features of the Enhanced Chip Set (ECS) are already fully supported in 2.0.

SUPPORT THE ECS

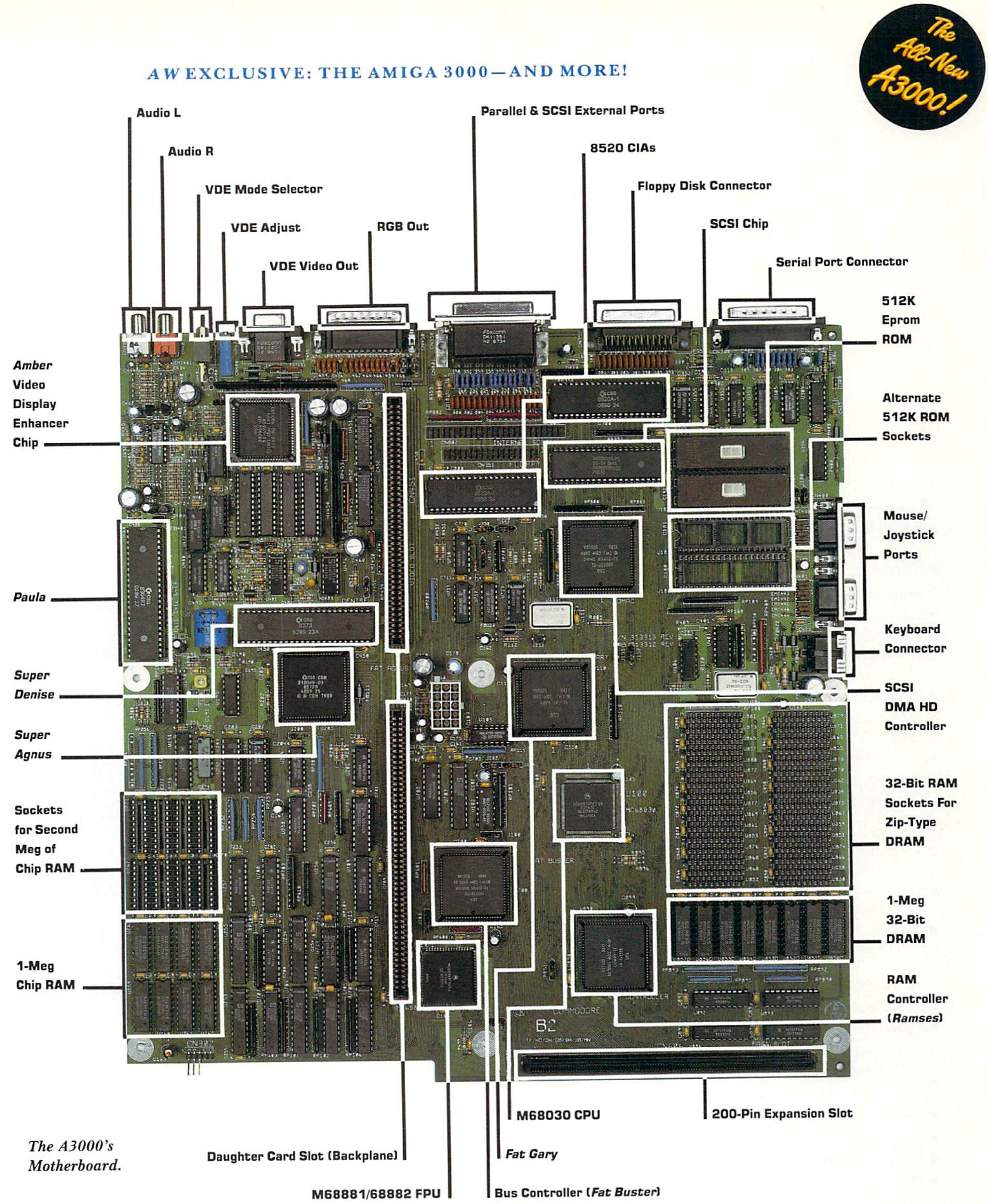
Native to the A3000 and an add-on for the A500 and A2000, the Enhanced Chip Set (ECS) offers a number of new options. Super Agnus increases the amount of potential chip RAM on A500 and A2000 systems from 512K to one megabyte, and from one megabyte to a whopping two megs on the A3000. In all systems, it increases the size of blitter actions to 32K×32K. The Super Denise provides four new screen-display modes: Productivity (640×480), Interlaced Productivity (640×960), SuperHi-res (1280×200), and Interlaced SuperHi-res (1280×400). All have severe color limitations, however, supporting a maximum of four colors (two bitplanes). Thanks to its programmable sync rates, Denise can offer several other resolutions. This unique feature allows programmers to create a variety of custom screen sizes that can be displayed on appropriate multisync monitors. The ECS also lets programs switch between PAL and NTSC displays. This feature will allow wider circulation and distribution between software created in the US and in Europe (see "Chips Ahoy!" p. 29).

Video mavens will be pleased that Denise makes several new features available to suitable genlock and video software. ChromaKey allows any specified color registers to be transparent, and BitPlaneKey lets you specify a particular bitplane to be transparent. In addition, you can choose to have the border be either transparent or opaque.

To show off all these enhanced graphics, Commodore developed the A2024 monochrome hi-res monitor and the A1950 Multisync color monitor. The A2024's paper-white display supports horizontal overscan, de-interlaces, and can handle resolutions of up to 1008×800. The A1950 supports all but the very largest resolutions that the ECS can display.

While quite a tally of new features, the above only touches on the major highlights of the new OS. Rest assured *AmigaWorld* will be covering the multitude of changes in detail in upcoming issues. □

—*LRW*



The A3000's Motherboard.

PHOTOGRAPHED BY CHARLES BARTHOLOMEW

Clearly, at a price of less than $4000, the A3000 has created an economic breakthrough.

The system also boasts a range of ergonomic improvements. Despite its added power, the system is smaller than a standard Amiga 2000. In fact, it is barely larger than the original A1000, itself a breakthrough in the size vs. power equation.

Some seemingly minor changes have been made that may very well be widely recognized as major improvements after users become familiar with them. For example, the mouse, joystick, and keyboard ports are on the side, rather than the front. This allows the keyboard to sit closer to the computer without crowding into and bending the keyboard cables. Also, a new external SCSI port on the back of the machine will prove convenient for daisychaining additional SCSI devices. With hard and floppy drives no longer attaching directly to the CPU chassis, users will find installing or replacing hard drives much easier.

I'VE *GOT* MANHATTAN. . .WHO NEEDS THE BRONX, THE 3000, AND STATEN ISLAND TOO?

Okay, many Amiga users will never buy an A3000. They will be more than satisfied upgrading an existing system. Yet, despite this, the A3000 announcement will affect every Amiga owner in some way, shape, or form. The Amiga 3000 is the launching vehicle for a number of technologies—including V2.0 of the operating system, the Enhanced Chip Set, the AmigaVision authoring system, and the networking devices—that will work on most other Amigas. With enough upgrading, existing users will end up with a machine fairly close to an A3000—save for the high-performance qualities of the 32-bit bus.

It is possible, of course, that future cards designed specifically for the A3000's Zorro III bus may not

Amiga 3000 Features



- 68030/882 @ 25 MHz or 68030/881 @ 16 MHz
- Amiga Enhanced Chip Set (ECS)
- 1 Meg chip RAM expandable to 2 Megs on board
- 1 Meg fast RAM expandable to:
  - 4 Megs on motherboard using 256 × 4 DRAMS
  - 16 Megs on motherboard using 1K × 4 DRAMS
- Built-in Display Enhancer (eliminates interlace flicker)
- Internal SCSI Hard Drive (40MB standard, 100MB optional)
- Internal Real-Time clock w/RAM
- 4 new Zorro III 32-bit Expansion Slots (All downward compatible with existing A2000 Zorro II cards):
  - 1 100-pin only slot
  - 2 100-pin slots w/AT-style extensions
  - 1 100-pin slot in-line w/A2000-style video slot
- 1 CPU expansion connector
  - 200-pin w/processor-takeover capability
- External expansion connectors:
  - 23-pin Amiga video (15.75 KHz typical)
  - 15-pin VGA-style video (31.5 KHz typical)
  - External SCSI connector
- 32-bit access to on-board ROM
- 32-bit CPU access to chip RAM
- 32-bit fast RAM support Custom Controller supporting static-column mode DRAMs and allowing CPU burst access to RAM
- 32-bit DMA-based on-board SCSI controller
- Low-profile case supporting total of three internal 3.5-inch drives
- Front-mounted power switch
- Easier disk-drive installation and removal (Floppy and Hard)
- Hardware and software support for 60 Hz video on European machines

The All-New A3000!

work on previous models. Also, although it is still too early to tell, some current software may not work with the A3000. Commodore, however, has already stated that it will strive to achieve compatibility with 90% of the present software—excluding copy-protected games. *AmigaWorld* will be following up this matter closely in future issues.

Software incompatibility, while an annoyance, should be a short-lived phenomenon. Commodore has long been providing developers with new and stricter guidelines that govern the creation of compatible software. Following these guidelines will help developers create software compatible not only with

Continued on p. 28

Not Just a Node Anymore

A LONG STANDING complaint about the Amiga is that it lacks networking. Many who would otherwise buy Amigas for specific applications have abstained, citing the paltry supply of networking products. Commodore's recent announcements, however, should silence the critics.

Commodore's A2065 Ethernet Card, which is expected to work on the A2000 and later models, supports both thick and thin Ethernet connectors. There will be AmigaDOS support for Novell, NFS (Sun), and TCP/IP protocols. A key networking standard, particularly for the growing Unix workstation environment, is the TCP/IP protocol. Many corporations now require TCP/IP compatibility before they buy a system. Relatively fast and cost-effective, Ethernet generally operates at 10Mbits/sec, and it will cost $349 per node.

A comparable network is available via Arcnet. The A2060 Arcnet card is also designed to work on the A2000 and later models. A slower but lower-cost network, the A560 Arcnet card for the A500, will be released in the near future.

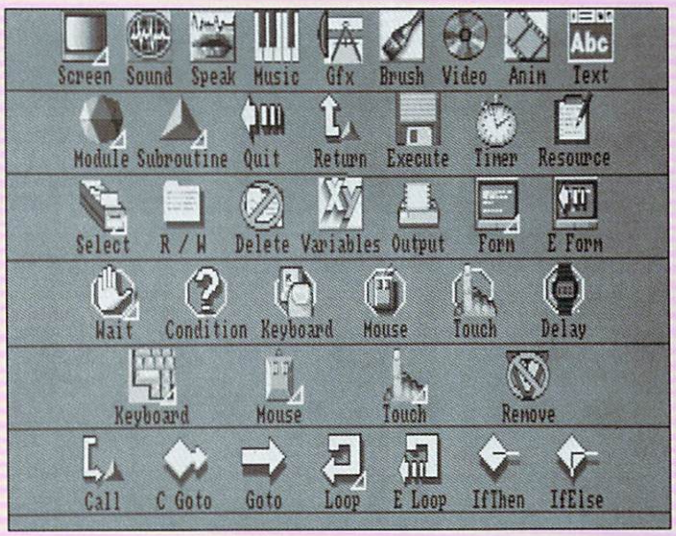
Commodore hopes the availability of these standard networks and network protocols will drive Amiga software developers toward programs that are network-aware (understand a network exists and takes advantage), if not network-based (such as groupware). When faced with such very attractive combinations, potential users should no longer have any reason to turn away. □

—DB

AmigaVision: A Real Sharp Shooter

LIKE A CUNNING field general, Commodore is springing a surprise attack on Apple and IBM. While the A3000 and the 2.0 operating system engage the big guns up-front, the new AmigaVision authoring system will outmaneuver the competition on its most vulnerable flank—its trumped-up claim to multimedia supremacy. AmigaVision offers more raw multimedia power than anything else on the market and is incredibly easy to control.

Basically a programming language, AmigaVision is probably like no language you have seen. Gone are the command lines and cryptic statements of traditional programming; they have been replaced by symbols and icons in this object-oriented system. An AmigaVision program is a visual flowchart that symbolizes the logical flow of the application (also called a course or project). By concentrating on the flowchart metaphor, AmigaVision manages to remove the tedium from program creation. Simple commands do not translate into limited power, however; the system lets you assemble pictures, brushes, sounds, speech, animations, music, video, text, and data files and control them interactively via a mouse, keyboard, or touch screen. ►



Submenu Contents:

AudioVisual

Module

Data

Wait

Interrupt

Control

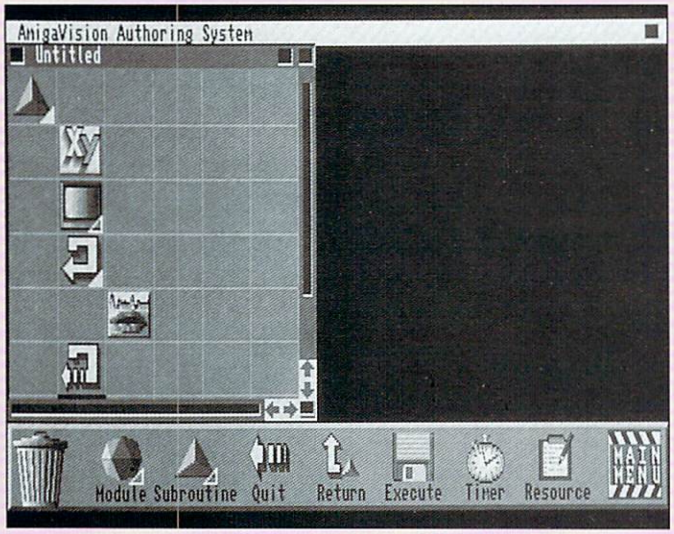
PICTURE POWER

Composed entirely of shades of gray and consistent with the new embossed style of Workbench 2.0, AmigaVision has a definite 3-D, NeXT look that is attractive and easy on the eyes. The interface consists of three sections: the Flow window, the Icon menu, and standard pull-down menus.

The Flow window is the canvas on which you create the application. Simply drag icon commands from the Icon menu below to their appropriate positions in the window. AmigaVision executes icons in a linear, top-down order, but offers branching statements and subroutine calls for more sophisticated program control. For long, complicated projects, scroll gadgets let you move up, down, left, and right through the the Flow window.



The laserdisk requester allows you to easily add full-motion video.



A sample subroutine open for editing.

AmigaVision's heart is in the Icon menu that stretches across the bottom of the screen. In addition to a Trashcan for unwanted icons, the main Icon menu offers access to six submenus of icon commands—Module, AV (AudioVisual), Wait, Data, Control, and Interrupt—at the click of a mouse.

The Module submenu contains seven command icons for basic program controls. Like bookends, the Module icon itself heads all courses or subsections of a program and the Quit icon resides at the end of a course, letting you exit the program. The Subroutine icon signifies the start of a subprogram within the main course or section, while the Return icon directs the program flow from a subroutine back to the section from which it was called. The powerful Execute icon lets AmigaVision run programs that were created by an outside source from Workbench, the CLI, or ARexx. Similar to a stopwatch, the Timer icon measures the running time of a section of a course. The Resource icon lets you load (or unload) data. By placing this icon early in the course, you can read your information from disk before the program actually needs it, and avoid breaking the course's flow later with repeated disk access.

To add flash to your presentation, the AudioVisual submenu gives you access to graphics, sound, and video. It houses nine icons: Screen (with 19 wipes), Brush, Anim, Sound (for digital sounds), Speak (voice synthesis), Music (SMUS files), Gfx, Text, and Video (laser disc). With these controls, you can quickly combine the elements into stunning displays.

The Wait submenu's icons let you add interactivity to your project, by instructing the program to read and react to user input from the mouse, keyboard, or touch screen. You can even limit the amount of time the program waits for input before continuing, or instruct it to wait for a certain set of circumstances or response.

The icon commands in the Database submenu generate data forms, read and write data, add, delete, and update records, as well as manipulate variables. You access variables from the Expression Editor, which has a host of mathematical and logical functions.

Like a traditional programming system, AmigaVision has a number of standard control commands for redirecting the program flow, including GOTO, Conditional GOTO, IF. . .THEN, IF. . . THEN. . .ELSE, a FOR. . .NEXT loop, and a CALL icon for launching subroutines. You can use these Control icons ►

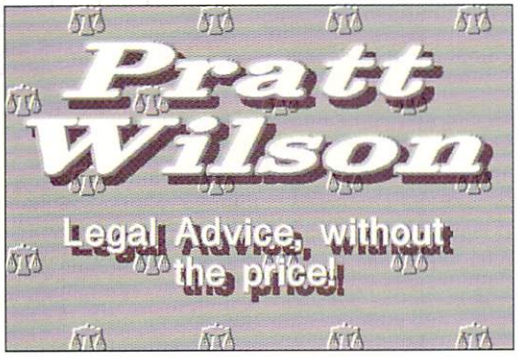
Title Page™

Title Page is a new video titling package for the Amiga computer. It will finally allow you to create screens full of effects once only possible in your imagination! If the 'look' you want is not in our package, simply create it! Modify text, effects, patterns, brushes, even backgrounds. If that's not enough, add a touch of fantasy with rainbow letters. If what you use isn't what you need, come experience **Title Page**.

The **Title Page** package was created under a demanding environment with demanding needs. It comes to you with all the features of a professional video titler.



- Supports all of the Amiga's video modes (except HAM).
- Handles any level of user selectable overscan. Even supports non-overscan overscan for harddrives with excessive DMA contention.
- Creates copper display lists allowing thousands of extra colors per screen. (example: create rainbow letters with a blue gradient background!)
- Supports standard Amiga IFF format allowing you to import/export screens with other graphics programs. Even with the display lists!



- Use any Amiga compatible font or colorfont. We supply you with 9 regular fonts in 3 sizes each PLUS four colorfonts in 2 sizes each.
- Make backgrounds with brushes or with gradient displays. You arrange the wallpaper and tiles at the distance and depth you want.
- Apply any effect to brushes, text, or images. If the 40+ effects included aren't enough, create your own with our GRAPHICAL effects editor, then modify them with the multiple built-in functions.
- Maintain hundreds of prefs & effects and call them back at the press of a key. Our effects include outlines, extrudes, shadows, embosses, glows, crosses, neons, stars, glints, punches, and 35 more!
- Execute ARexx commands from the keyboard or scripts. Title Page understand over 65 different commands. This allows you to add and modify the normal features available from the menus.
- Once you've created your pages, show them off with our included player using any of the 45 different transitions. You can even call ARexx scripts from within your scripts therefore adding an unsurpassed capacity of commands to your slideshows.
- All this functions properly on any 512Kb Amiga. Don't worry though, we remembered everyone's needs are not the same, so we also include charged-up versions for users with 1Mb of chip RAM.

INTRODUCTORY OFFER!*

Owners** of other Amiga titlers are eligible for a **$100.00 US** dollar rebate off the suggested retail price of $199.95 US.
To obtain the rebate, just send us page 7 from the original manual along with $99.95 US. Please contact:

Eschalon Development
2354 Côte Ste. Catherine
Montreal, Québec
H3T 1A9 CANADA
Telephone orders:
(514) 340-9244

**Supported packages include: TV*TEXT (all), Pro Video (all), Broadcast Titler, Video Titler, Video Page, Deluxe Paint (all), Digi Paint (all).
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with variables and absolute values, and customize them in the Expression Editor.

The last submenu, Interrupt, has icons for defining reactions to specified mouse, touch-screen, or keyboard events. Once you define these events, the program automatically watches for them, so little extra programming is required.

REINFORCEMENTS

The three Intuition menus (Project, Edit, and Tools) give you more global controls. In the Project menu, you can load or save your work, install or create Runtime courses for distribution to other AmigaVision owners, set your default configuration, print out a course (in text or graphic-image form), or run a course. From the Edit menu, you can search for a named icon, collect icons together, copy them, preview their actions, or collapse the contents of a subroutine to a single icon with the Telescope feature. To make the full subroutine visible again, select the Subroutine icon and reissue the Telescope command. Telescope lets you quickly see the overall flow of a program without individual commands getting in the way. The Tools menu gives you access to three powerful subareas: the Object Editor, the Video Disc Control Panel, and the Database Editor.

In the Object Editor, you define the appearance of a screen. You can add hotspots for the user to click on to select options, text, and input fields, and you can select color palettes, graphic shapes, or screen resolutions and modes. You can even instruct AmigaVision to load IFF background pictures into the display automatically, and then overlay them with information areas, hotspots, and so on.

The Video Disc Control Panel allows you to browse through a video disc. With it, you can play a disc or scan, or search for specific frames and sequences for later inclusion in your course. When combined with a genlock and video disc, AmigaVision is an incredible tool for mixing computer data and video into a smooth application.

The Database Editor lets you create disk-based databases and information files. Each record can contain up to 128 fields and a maximum of 4000 total characters. For field data types, you can specify string, numeric, Boolean, or date information. The database cannot directly support pictures and sounds, but fields can hold the name of a picture or sound file. The program can then easily load the file into memory and display or play it. You can designate any field as a Key field on which to index a sort of the records.

DEPLOYMENT

Almost as impressive as AmigaVision's capabilities are Commodore's plans for the program's distribution. At the launch of the Amiga 3000, the company announced it will bundle AmigaVision with every new A2000, A2500, and A3000 sold. If you buy your machine between the launch and the program's release (scheduled for late May or early June), you will qualify to receive one free AmigaVision package. Consult your dealer before purchasing an A500, however, as Commodore may offer AmigaVision free if you buy an A500 with one meg of RAM, the program's minimum requirement. If you already own an Amiga, the authoring system will be sold as a stand-alone package for $149.

After using AmigaVision for several weeks, I am very impressed. From my vantage as a programmer used to more conventional ways of creating applications, I expected to find the authoring system cute but limited. I was very wrong; it is extremely powerful. With AmigaVision, I can create multimedia applications in hours, instead of the months it would take me with C or BASIC. More power is on the way, as well. Within the year, Commodore plans to upgrade AmigaVision to support MIDI and animbrushes, among other things. Apple and IBM had better start watching their flanks. □

—LRW

Amiga Announcements At a Glance

Amiga 3000 (25 MHz/40 MB)	$3999
Amiga 3000 (25 MHz/100 MB)	$4499
Amiga 3000 (16 MHz/68881/40 MB)	$3299
A1950 Monitor	$799
A2024 Monitor	$749
A2060 Arcnet Card	$229
A2065 Ethernet Card	$349
AS225 TCP/IP for the Amiga	$199
AS220 Novell Client Software	$149
AS2088T Turbo XT Bridge	$699
A10 Stereo Speakers	$39
AS250 AmigaVision	$149
V2.0 AmigaDOS	TBA

from p. 25

today's A3000 and V2.0, but also with the even more impressive systems being developed behind the locked doors at Commodore engineering.

The advances inherent in a system such as the A3000/V2.0 also point out the importance to owners of registering their software. It would be a shame to miss out on updates for compatibility just because you failed to send in your registration card.

There is no question that the ramifications of all the announcements connected with the A3000 may pose some risk to owners of current Amiga systems. But the sheer technological potential—for *all* Amiga users—promised by these new developments is so great that everyone will benefit. What we have here is not just a new machine, but the culmination of all the successful Amiga developments over the past three years. Yes, the A3000 did just take Broadway by storm, but that was only the opening act. Stay tuned for the sequels. ■

Chips Ahoy!

Commodore's new ECS will enable the whole Amiga fleet to plow the waves with a great deal more custom processing power in the engine room.

By Sheldon Leemon

ALTHOUGH BUYERS OF the new Amiga 3000 can benefit from the Enhanced Chip Set (ECS) right from the maiden voyage, Commodore doesn't intend to leave current Amiga users back at the dock. The significant improvements to the Amiga's custom chips will be available through upgrades to all existing Amiga models (with considerable difficulty, however, to the A1000).

New versions of the Agnus and Denise chips will mean a doubling of the current (512K) amount of chip RAM, increased multitasking possibilities (particularly with graphics- and sound-intensive applications), and much higher-resolution display capabilities (especially useful for sophisticated video work)—among a host of other ECS improvements. So let's open up those CPU hatches, climb down into the hold, and see what these new chips are all about!



BELOW DECK

Much of the Amiga's power is derived from its three custom chips, Agnus, Denise, and Paula. Most computers have only one main processor, which must do all of the work associated with producing graphics and sound, in addition to running applications programs. The Amiga's custom chips, however, handle a lot of the graphics and sound work by themselves, freeing up the processor for more important work, such as multitasking. Having these custom chips so tightly integrated into the system dramatically improves the Amiga's performance, but it also means that any real upgrade of the computer's capabilities has to include an upgrade to the custom chip set—hence the ECS.

As with previous changes to the Amiga line, the improvements introduced by these chips represent evolutionary, not revolutionary, developments. Anybody expecting a 1000 × 1000-pixel display with 12 million colors is in for a disappointment. Nonetheless, the ECS adds a number of small but quite powerful enhancements that can be integrated into the system without requiring ►

ILLUSTRATED BY DAVID TILLINGHAST

massive changes to all of the existing software.

SUPER AGNUS: A GENEROUS CHIPMATE

The ECS consists of new versions of the Agnus and Denise chips. Super Agnus (or ECS Agnus), a revised Fat Agnus chip, was introduced last fall. From the user's standpoint, the most important change Super Agnus makes is that it expands the maximum amount of memory that can be directly controlled by the custom graphics and sound chips from 512K to one megabyte. This does not mean that the Super Agnus chip itself adds memory to the system; rather, it allows existing memory to be divided up differently. While the Amiga's main processor can access up to nine ►

Getting the Chip Aboard *Your* Ship

All Amiga 2000 systems (and some Amiga 500s) manufactured since last fall come with the Super Agnus installed. It's easy to identify A2000 systems with the new chips, because there is a "1 Meg Chip RAM" sticker right on the box. Even without the box, you can identify such machines by running the AVAIL command from the CLI or Shell. If the system has a megabyte of chip RAM, the third item (in the Maximum column) in the first row (marked "Chip") will read 1040152. If not, the number will be half as great.

The situation is trickier for A500 owners. You cannot tell if you have the new Agnus chip without opening up the computer. (If you have the chip, you will see only four RAM chips on the motherboard instead of 16.) Because the A500 comes with only 512K of memory, the computer is set at the factory for 512K of chip RAM. Even if you have the Super Agnus and plug in a 512K expansion module, the RAM will not become chip RAM automatically. Your dealer must make internal modifications to the A500 before it will recognize the extra RAM as true chip RAM. Once the modifications are made, the computer will not operate unless the memory-expansion module is plugged in.

An easier way to discover if your A500 has the Super Agnus is to use a program that identifies what kind of custom chips are installed in your computer. One such program is the shareware System Information 2.0b, by Pregnant Badger Software, which is distributed as part of its Kramden Utilities.

If you have an Amiga 2000 or A500 with a megabyte of memory, but do not yet have the Super Agnus chip, your local dealer can both sell you the chip and install it for you. This should cost you approximately $160 ($120 for the chip and a $40 minimum service charge for installation). If you do not have a service center in your area, or are experienced in electronics and want to install the chip yourself, you can obtain a Super Agnus from mail-order sources for about $75–$100.

Amiga 1000 owners will have a much more difficult time upgrading to the Super Agnus. The original A1000 Agnus was a smaller chip, so there is literally no room to plug in the new one. There are two Amiga 1000 upgrade boards that address this problem. Both were announced, although not yet delivered at the time of writing—but each should be out by the time this article appears. Greg Tibbs' The Rejuvenator ($499.95, Expert Services) and the DVS-Wonder ($399.95, Delaware Valley Software) completely replace the existing A1000 daughterboard, and provide sockets for the ECS Agnus and a megabyte of chip RAM.

The actual installation procedure varies slightly depending on the model and motherboard revision. Installation on an A2000, for example, is somewhat easier than on an A500. In either case, installing the chip entails prying the old chip out of its square socket and plugging the new one in. In order to enable a megabyte of chip RAM, however, you must change two jumpers on the motherboard. (This is true even for A500 systems that come with the Super Agnus installed.)

In any event, you will need to cut connections between jumper pads on the motherboard, and you may have to solder other connections. This job may not be very tough for the experienced hardware hacker, but there are some pitfalls for the unwary novice who has never opened up the computer before and does not have such tools as a chip extractor, utility knife, Torx screwdriver, and fine-tipped soldering iron. Removing the old chip from its square socket can be tricky, as it may be wedged in very tightly, making it difficult to extract without cracking the socket. Cutting pads on the motherboard also requires some care. Another factor to consider is the possibility of a problem with the chip itself. Repair centers report that early production runs of the Super Agnus chip have had a failure rate as high as 15–20%. Defective chips may not work at all, or they may cause strange interruptions of the display in some programs. The choice is up to you, but at least if a service center installs and tests the chip for you, you should come home with a working system. If you do it yourself and get a bad chip, you will have the extra hassle of figuring out what went wrong, and of getting a new chip if necessary.

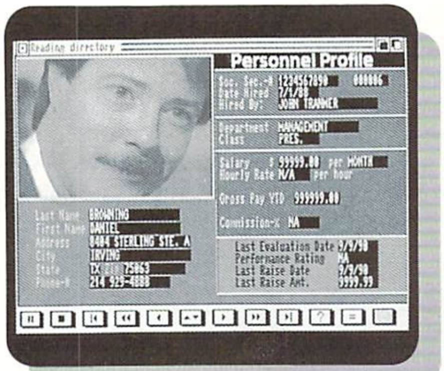
Unlike Super Agnus, the ECS Denise will be relatively easy to install. It will use the familiar DIP package (the rectangular one with two rows of legs). Simply pry the old Denise carefully out of its socket, and replace it with the new one, making sure that the new chip faces the same way as the old one. You should be aware, however, that the new Denise will not work properly with the old Fat Agnus. If you do not have either chip, you should probably have a dealer install both at the same time. □

—SL

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megabytes of memory, the custom chips can access only a small part of that memory, known as "chip" RAM. The first 512K of memory on all Amigas is chip memory, but until Super Agnus, the second 512K on both the A2000 and (optionally) the A500 has been treated like expansion memory that could be accessed only by the processor. With the addition of a Super Agnus chip (and some changes to jumpers within the computer to let it know about the new configuration), the second 512K becomes an extension of chip memory, boosting it to a total of one megabyte.

Changing expansion memory to chip memory will not allow you to run any programs that you could not run before, but it will allow you to run more than one graphics-intensive program at the same time. With only 512K of chip RAM, for example, it is nearly impossible to run programs like Professional Page (Gold Disk) and DeluxePaint (Electronic Arts) together, particularly if both programs use a separate high-resolution screen. With a megabyte of chip RAM, however, you can easily run any two such programs.

The extra chip RAM also extends what you can do with single programs. It makes it possible to run Pro Video Gold (Shereff Systems) from the Workbench, rather than always having to boot the program directly. It increases the maximum page size in DeluxePaint to over 1000 × 1000 pixels in 16-color, ►

Test Your ECS IQ

Q Does Super Agnus give you more memory? Does it take any memory away?

A Super Agnus does not change the total amount of memory in your system. It merely allows the computer to divide up existing memory differently. By expanding the amount of memory that can be accessed by graphics and sound chips, it makes it possible to run several graphics-intensive applications at once, as well as increasing the maximum size for animations and other graphics projects.

Q Will Super Denise perform the same functions as MicroWay's flickerFixer?

A No. In fact, the new Amiga 3000 includes a display enhancer similar to flickerFixer, even though it already has the Super Denise chip. A display enhancer like flickerFixer de-interlaces the standard Amiga graphics modes, and supports the same number of colors as the standard modes (up to 4096 in HAM interlaced). All current applications automatically take advantage of this noninterlaced display. Super Denise, on the other hand, provides some brand-new graphics modes, including a noninterlaced 640 × 480 Productivity mode. Current applications that open a window on the Workbench screen should take advantage of the new modes, but programs that open custom screens will have to be rewritten in order to use them.

Another important difference is the monitors they require. flickerFixer displays the standard graphics modes on a VGA monitor, while Super Denise needs a VGA monitor for the new modes, and a standard monitor for the old ones (displaying both on one screen requires a multiscanning monitor). The ECS Super Hi-Res mode will display on a flickerFixer (with some loss of horizontal resolution), but the doublescan modes (such as Productivity) are not displayed correctly on such a device.

Q Will Super Denise give us more colors?

A The new higher-resolution ECS modes actually have fewer colors than standard modes. Because only a limited amount of display information can be sent out the video port, a noninterlaced screen can be achieved only by dropping the maximum number of colors to four from a palette of 64. Even at four colors, these modes put such a large burden on system resources that they may cause problems for some programs. For everyday use, you will probably want to run the 640 × 480 noninterlaced mode on a black-and-white screen.

Q Do you need a special monitor for the new graphics modes?

A Some of Super Denise's new modes, such as Super Hi-Res (1280 × 400 interlaced), will work on current monitors such as the 1084. Others, such as the noninterlaced Productivity mode, require a VGA-style monitor. In order to take advantage of both the old and new graphics modes, you will need a multisync or bisync monitor.

Q Do the new modes bring any enhancements to desktop video?

A The 1280 × 400 mode should work with current genlock devices, and will no doubt be quite useful for video titling. In addition, the Super Denise provides some new genlock options, such as replacing colors other than the background color with the external video source.

Q Will Super Denise work without Super Agnus? Will Super Agnus work without Super Denise?

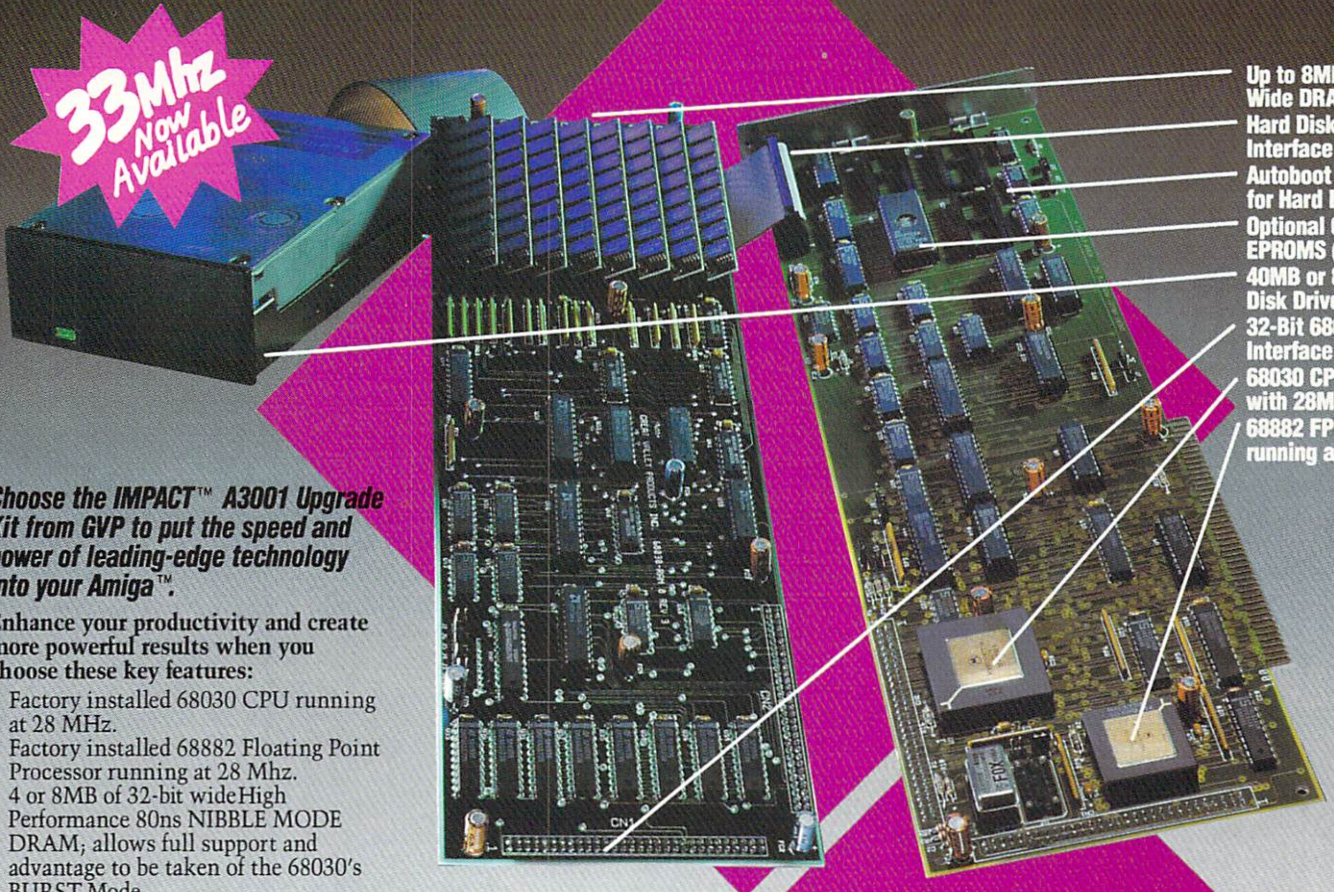
A Even without Super Denise, Super Agnus will expand maximum chip RAM to one megabyte. Super Denise, however, will probably function like an old Denise chip without Agnus, but the new graphics modes require both chips. In short, you can get Super Agnus alone, but if you want a Super Denise, you will need a Super Agnus also. □

—SL

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hi-res mode, and allows you to pick up a brush as large as the screen in that mode. In general, it extends the maximum size and length of projects that use graphics and sound, particularly when you work in high resolution with a lot of colors.

AGNUS: FULL STEAM AHEAD FOR EUROPE

Although increased chip RAM is the most noticeable improvement brought about by Super Agnus, it is not the only one. The blitter (a coprocessor used to move graphics objects around at high speeds) has been changed so that it can move objects up to 32K × 32K bits in size, instead of 1K × 1K, as with the older version of the chip. Down the road (particularly with 2.0 system-software support), this may make it easier for programmers to manipulate larger scrolling virtual screens.

Another change in Super Agnus allows the Amiga to output its display at either NTSC (American) or PAL (European) scan rates, making it possible to get a PAL display from a US computer (using a multisynchronous monitor or manually-adjustable set). This may make it easier to run European software that has not been designed for American displays. The display format can be changed under software control, and in version 2.0 of the operating system, it will be possible to select a PAL or NTSC display from the Workbench.

Because Super Agnus has been around for several months, some Amigas already contain the new chip. To find out if your system does—and to learn how to install Super Agnus if it does not—consult the sidebar "Getting the Chip Aboard *Your* Ship."

SUPER DENISE: TRICKY SIGNAL-ROOM OPERATOR

In addition to its own capabilities, Super Agnus helps to unleash the power in the other half of the ECS team, the soon-to-be-released Super Denise (price pending). Super Denise has two tricks that it can play with the standard Amiga display. The first is to send out twice as many pixels per line as an ordinary hi-res display. In this Super Hi-Res mode, each pixel is half as wide as normal—even the mouse pointer sprite is half as wide as usual. Super Hi-Res displays on the same kind of monitor as the current video modes, and it works with genlocks. It can provide a noninterlaced display of 1280 × 200 pixels or an interlaced display of 1280 × 400 pixels—highly useful for video work. Sending out twice the amount of pixel information, however, means that the computer can send out only half as much color information. Super Hi-Res displays can show a maximum of only four colors out of a palette of 64. Even at four colors, Super Hi-Res takes up a lot of the machine's processing power, making it unsuitable for some multitasking activities.

Super Denise's second trick is a bit more obscure. It enables software control over the synchronization and blanking signals. This means you can alter the display signal to fit just about any kind of monitor. The most common use for this trick is to produce a mode called doublescan—where the horizontal scan rate is doubled to match the rate used by IBM VGA monitors. Doubling the horizontal scan rate gives you twice as many lines, with half as many pixels on each line. For example, doublescanning a medium-res 640 × 240 noninterlaced display gives you a 320 × 480 noninterlaced mode called VGA Lo-Res. Changing the scan rate does not change the number of colors that can be displayed in a given mode, but it does require the use of a VGA-compatible (or multiscanning) monitor that can accept the higher scan rate.

In addition to VGA monitors, the programmable Super Denise may be used to sync the Amiga to more exotic displays, such as those with refresh rates compatible with motion pictures. Currently, you cannot successfully film a TV-set or video-monitor display with a movie camera because of incompatible differences in the frame rates between the two media. With Super Denise, however, you can alter the refresh rate of your monitor in a way that will allow you to simply point the camera at the screen, film the display, and come away with clear, distinguishable results.

NO SHORE LEAVE FOR HARD WORKERS

By itself, doublescan may not be very useful, but when you combine it with the new Super Hi-Res mode, you get a noninterlaced 640 × 480 display called Productivity mode. As a doublescan display, this mode requires a VGA-compatible monitor, and because it is also Super Hi-Res, it is limited to four colors. Because Productivity is so similar to the current 640 × 400 interlaced mode—only without the flicker—it should be useful for CAD and desktop-publishing applications.

Workbench 2.0 will allow you to set the Workbench screen to Productivity mode, so programs that open a window on the Workbench screen should work in this mode without any changes being made to the program. Programs that open their own custom screens, however, will have to be rewritten to take advantage of Productivity mode, or any of the other new ECS display modes.

In addition to new display modes, Super Denise also offers some genlock enhancements. With the current Denise, genlock video always replaces the background color and the border around the display (which is the same color as the background). Super Denise, however, has four new settings that let you vary this scheme somewhat under software control. The ColorKey feature allows you to make any combination of pen colors transparent, not just the background color. BitPlaneKey lets you use a single bitplane as transparency mask—where there are

"ones" in that bitplane, video shows through, and where there are "zeros," the computer graphics are displayed. The effect is that of creating a transparent area determined by shape, not color. BorderNot-Transparent can make the border opaque, even if the normal border color is transparent. BorderBlanking can make the border transparent even if the normal background color was made opaque by ColorKey.

For pointers on installing the Super Denise chip (a relatively simple procedure), check the "Getting the Chip Aboard *Your* Ship" sidebar.

Closing the ECS Log

Although the ECS may not be as big a step forward as some might have hoped for, it certainly does help the Amiga keep pace with the rest of the microcomputer industry. A megabyte of chip RAM advances the machine's capabilities in the key areas of desktop publishing and multimedia, while the new graphics modes provide video enhancements and a noninterlaced display that is comparable to the industry standard. Most importantly, these changes have been accomplished without sacrificing compatibility with existing software, ensuring a steady development of the machine's capabilities. ■

Sheldon Leemon is the author of Inside Amiga Graphics *and other books, and he is a frequent contributor to many computer publications. Write to him c/o* AmigaWorld, *Editorial Dept., 80 Elm St., Peterborough, NH 03458.*

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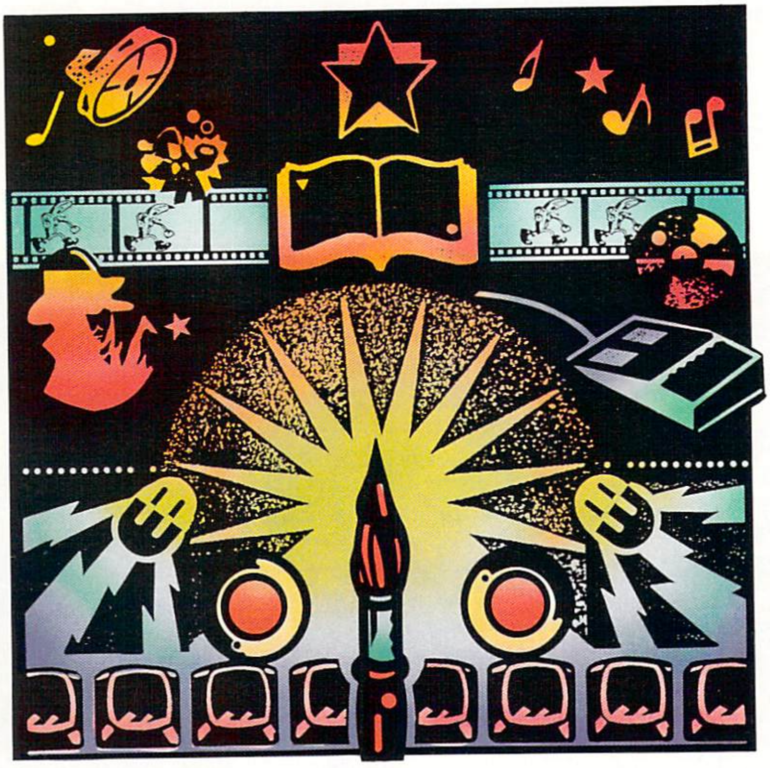
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Interactive Construction Kit

CREATING INTERACTIVE MULTIMEDIA PRODUCTIONS WITH DELUXEVIDEO III

By Gene Brawn



IN THE WANING years of the last century still photographs flipped into motion. Those first crude movies fascinated people and changed the way images were viewed. Now, as our century nears its close, we are faced with a similar image revolution—the arrival of interactive, multimedia productions. Not only do the pictures move and talk to us, but also we can view them in any order we choose. If you do not like how one story line is progressing, detour to another.

To commemorate the efforts of the film pioneers and to illustrate the principles of creating the next wave of presentations, I designed an interactive production called "The Birth of Film" with DeluxeVideo III (Electronic Arts, $149.95). While the project sounds daunting, I had slightly better equipment than Edison and Dickson or Stanford and Muybridge. With the aid of DeluxePaint III (Electronic Arts, $149.95) and Digi-View (NewTek, $199.95), I wrote, assembled, and scripted the demo in about one week. To experiment with these techniques, create some screens similar to the illustrations and anims, and load up DVideo. Your designs need not be exact replicas of mine; control of program flow and user interaction are the key points of this tutorial.

DRAFT YOUR BLUEPRINTS

The essence of multimedia (this week, at least) is interactivity and nonlinear browsing through information. Sometimes called hypermedia, these information systems use screen "hot spots" (or buttons) that the user clicks to jump to related screens. If you link enough subjects, the user can navigate freely through the information, unhindered by predetermined structures or paths. While a free-flowing ramble for the user, behind the scenes all these inter-connections (threads) are often quite complex. The Muybridge thread alone in "The Birth of Film" is four levels deep, with six information modules, a short slide show, four animations, and an interactive display of a house.

Always make a map of your threads before you build your presentation. As a sample, Figure 1 maps the Muybridge thread. It begins on the introductory home screen with a highlighted ►

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reference to Eadweard Muybridge (pronounced MY-bridge). When you click on Muybridge's name, you are transported to a screen with biographical information about the 19th century photographer (Figure 2). This biography screen is actually a menu of choices that lead you to more displays illustrating other events in Muybridge's life. Because Muybridge invented motion pictures, I included some short examples of his films, such as the galloping horse in Figure 3. The Photographer module contains a slide show of his pictures, while the Stanford section uses a picture of a mansion with hot spots on the facade. Click on one of the windows, for example, and an image of the room behind it slides into view. This sounds like a lot of work, but careful planning and DeluxeVideo's speedy interface made the process fast and easy.

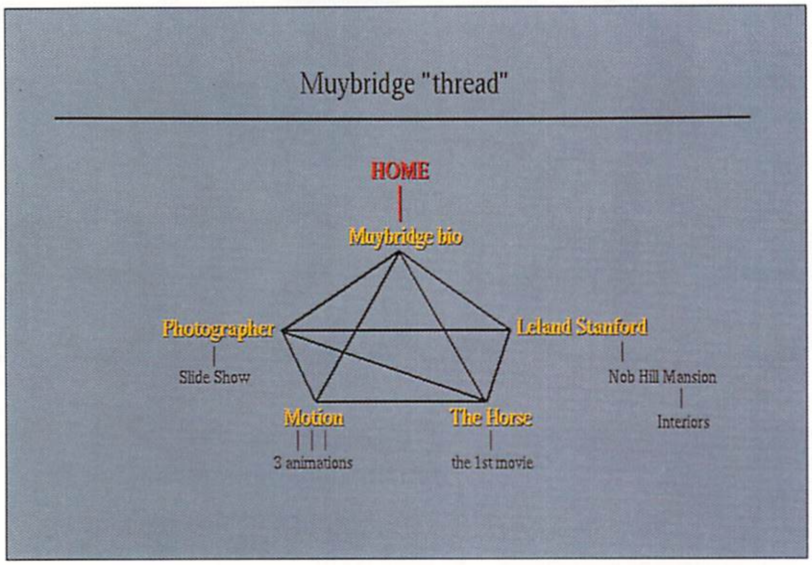


Figure 1. Always map out your informational links before constructing the scenes.

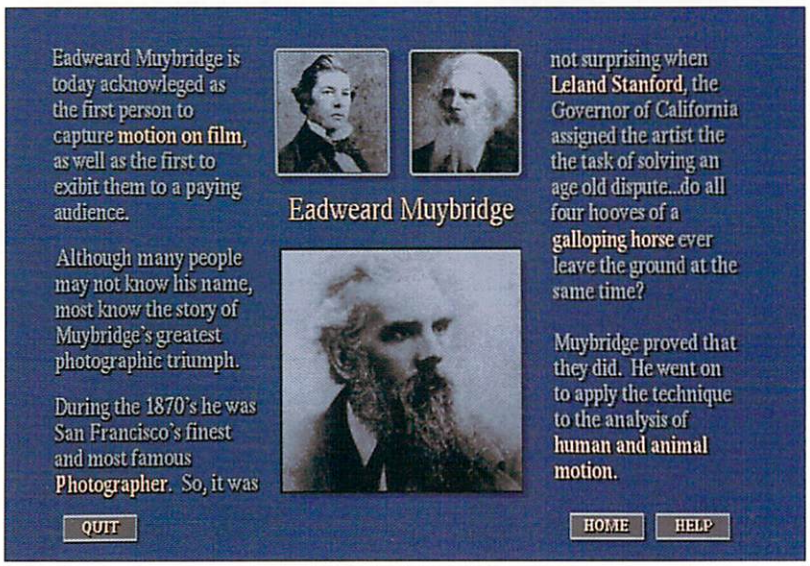


Figure 2. Click the buttons or highlighted words to jump to related screens.

The key to creating multimedia with DeluxeVideo III is learning to manipulate the Wait and Goto effects. Wait turns on the cursor and tells the computer to wait for a mouse click. If the user clicks an object with an attached Goto effect, the program will jump to the specified video scene or label name, and continue the program from there. A clickable object in DVideo can be a brush, a line of text, or even an "invisible" area (not highlighted to the user) of the display. The linking objects in the hi-res Muybridge scene (Figure 2) are the beige-colored key phrases, which are actually clickable brushes.

Reconstructing the scene is simple: Tell the program to load the background picture, text, and buttons; position and display the objects, and wait for a mouse click.

Begin with a fresh DeluxeVideo script and double click on the lone scene's icon to enter the Scene Editor. Pull down the Scene menu and select Change. From the pop-up menu that appears, turn on the Restore Black option and turn off Double-Buffer, as this is used for effects and animation. Click in the Name box and type "Muybridge."

The next step is to load and position the background picture ("track" in DVideo lingo). Pull down a new track from the Icon menu and select your display of text and photos from the File menu. Pull down an Effect track, select a Position effect, and place it at time 0:00.0. When the What & Where requester appears, turn off Show At Start to hide the screen and anything attached to it while the program positions the buttons during playback. Click on Okay to return to the Scene track. Finally, drag a Show effect onto the Picture track and position it at 0:00.10; your screen is now ready for display.

Button, Button! Where to Put The Button?

Creating a clickable object is equally easy. I used brushes for my hot spots because they are so universally flexible, although I could have achieved the same thing with the Textline or Box effects. For my button brushes, I used DeluxePaint III to grab the words I wanted to highlight on the text screen. I then recolored them so they would stand out when stamped over the background picture.

To add a brush to the scene, pull down a Brush track and select the object's brush file (for example, the word "gallop"). Place a Position effect at about 0:00.0 on the timeline. You need not turn off Show At Start, because the brush will not display until the screen does. Do, however, click the Where button to display the preview screen. Because the brush is connected to the Picture track, you will see both the background image and the brush you are positioning. Stamp the brush so that it completely covers the original word. When you are satisfied, exit What & Where by clicking Okay.

Of course, you must tell the program what to do when the user clicks the brush, which is where the Goto effect comes in. Place it at time 0:00.5. When you select the Goto effect, DVideo displays a text requester and waits for you to enter the name of the scene (or label within the current scene) the program should jump to. For the example, enter "Horse" in the Name box.

The last step in building this interactive sequence is to command DVideo to wait for a mouse click. To do so, drag a Control track into place below the Brush track and position a Wait effect on it at time 0:00.15. A small requester that allows you to change the duration of the Wait effect will appear. If you do not click the Time button, DVideo will wait for input forever. This is fine for now, so leave it alone. If you do set a time limit and the program does not receive input before it expires, DVideo merely continues playing the script.

Your finished scene should look like the one illustrated in Figure 4. To test your new script, select Play Scene from the Project menu. If all is well, your new, highlighted button will be just where you placed it on the text screen. When you click this button the sequence will end, rather than jumping to the specified scene. If you want to preview the jumps too, use the Play Video menu selection instead. Be careful: DVideo will hang if the named scene does not exist.

If your scene does not work as you intended, be sure that all the Effect icons are on the timeline in order: Position should be at 0:00.0 on the Brush and Picture tracks; Goto at 0:00.5 on the Brush track; Show at 0:00.10 on the Picture track; and, finally, Wait at 0:00.15 on the Control track.

If you were building the complete Muybridge scene, you would need seven more active brushes. Considering the amount of work it took to set up the first brush, we are fortunate, indeed, that DVideo offers cut-and-paste tools. As a shortcut, these new functions let you copy any scene, track, or effect and paste it anywhere in *any* video. To clone a hot spot, click the original Brush track, then select Copy from the Edit menu. Choose Paste from the same menu, and stamp the new track below the original. Finally, load this track's new brush, reposition it at the proper location with the What & Where requester, and modify the Goto label. These tools are even more useful for cloning entire scenes; I laid the foundation for another "The Birth of Film" thread this way.

When I Say Jump, Pardner...

Now that we know how to make DVideo jump to any part of a script at the click of a button, we need a scene to go to. The previous screen was static, so let's add some pizzazz to the information at the destination. In the next scene, labeled Horse (Figure 3), the display is a mix of hi-res and lo-res screens and the script contains a click-to-start animation in the lo-res region.

Start the script by pulling down a new Scene icon and placing it anywhere beyond the first scene on the Video track. As before, open the new scene by double-clicking its icon. Access the Change requester from the Scene menu and rename the scene "Horse." Because Horse includes an animation, leave Double-Buffer on. Unlike in the first scene, here the default settings are perfect; simply exit the requester.

To create the background, you must combine a memory-efficient lo-res graphic and a hi-res bitmap (which is the best choice for text.) The cleanest way is to create a brush of each picture with a paint program. Keep them as small as possible; grab only the parts of the screen that you want to display. Next, even though you created two brushes, *load them as* ►

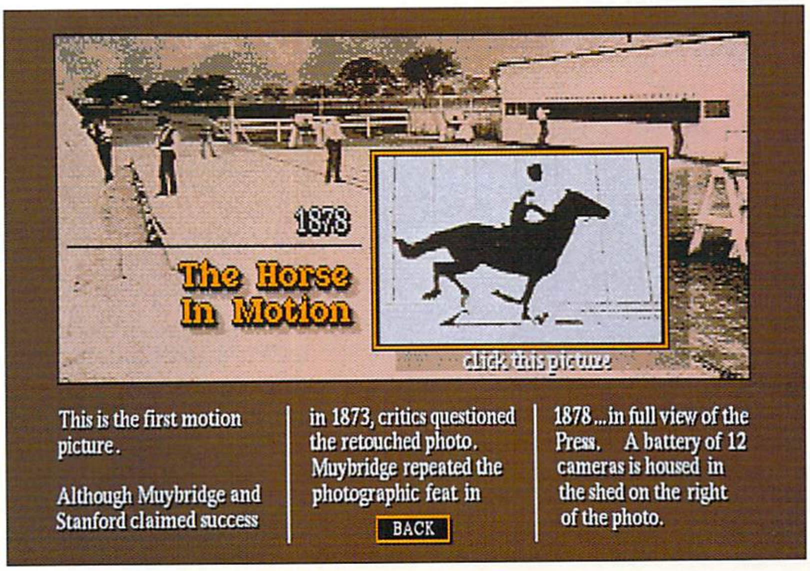


Figure 3. Pump some life into your presentation by animating a picture within a picture.

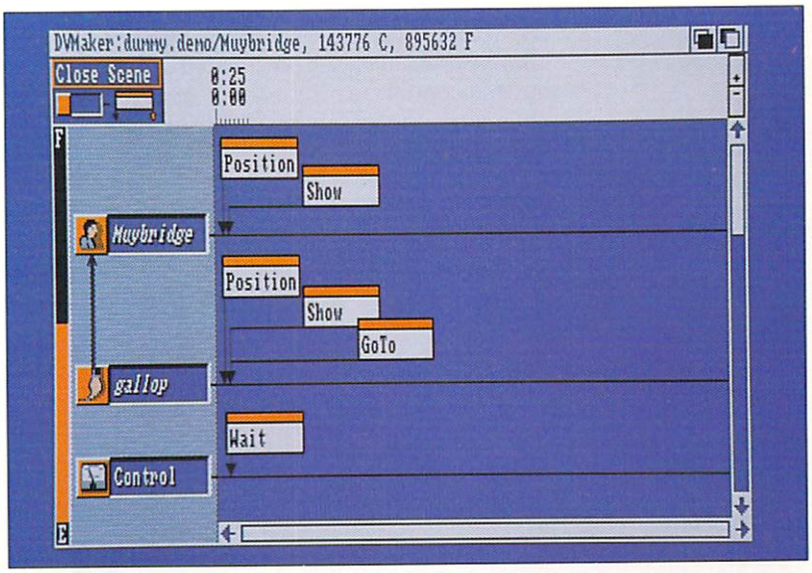


Figure 4. The time line is the key to scripting a scene.

pictures. This way, DVideo allocates just enough buffer space to hold the now smaller-than-normal images. If you had assembled the display from brushes, you would have had to create two backdrop screens to hang them on—taking up a lot more memory.

To display the graphics, stamp a Position effect at 0:00.0 on both Picture tracks. Because DVideo always displays undersized pictures and brushes centered

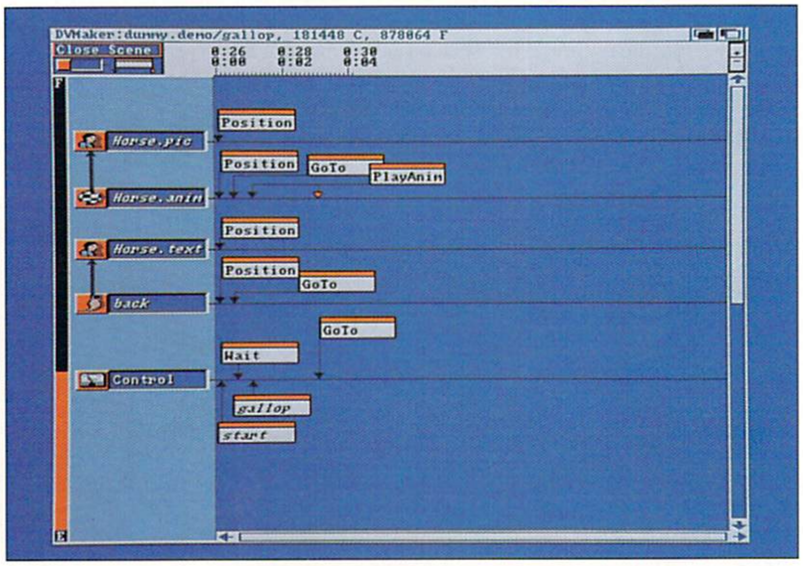


Figure 5. Compare your results with this script for Figure 3.

on the screen, you must drag them into the proper places with the Where function in the What & Where requester. Be sure to turn off the Show At Start option and put a Show effect on both tracks at time 0:00.20.

Use the Preview option to check the position of your new screens. During the test, the hi-res text screen will display in lo-res. Don't worry: DPaint does not store the resolution information with a brush, so DVideo assumes that the text is lo-res. To correct this mismatch, double-click the hi-res track, then click on the Info button. At the bottom of the Raster Info requester are three buttons: Modes, Hi-res, and Lace. Turn them all on.

Reviving History

Two more tracks to go: The first is an animbrush of a galloping horse (the world's first movie) animated in place on the lo-res picture. If the user clicks the picture (the animbrush), Muybridge's horse animates within the original picture's frame. This simple but effective technique never fails to impress.

Create a new DVideo Animbrush track. This track will automatically connect to the hi-res track immediately above it. Therefore, you must reconnect the animbrush to the lo-res screen by clicking on the brush's track icon and dragging the arrow to the corresponding part of the lo-res Picture track. Use a Position effect and its Where function to place the brush on the lo-res screen at 0:00.0. Select a Playanim effect and locate it at time 0:00.25. Program the animation to loop a few times by changing the number in the box to the Cycle button's right to 4 or 5, and exit. You now have a picture-within-a-picture that will come to life when you click it.

Now, pull down a Control track and put a default Wait effect at time 0:00.10. This time, you want the Goto effect on the Animbrush track to point to a label on the Control track at the bottom of this scene, rather than to another scene. Grab a Label effect and stamp it at time 0:00.20. Name it Gallop and exit.

Place a Goto effect at time 0:00:05 on the Animbrush track and label it Gallop. I put a Label effect called Start at time 0:00:0. Then, I put another Goto effect pointing to the Start label on the Control track just beyond the time of the end of the Play effect on the Animbrush track. Now the user can play the anim multiple times, because the scene rewinds and waits automatically as soon as the anim plays out. The button labeled Back at the bottom of the screen shifts control to the Home screen as an escape route from the scene. It is set up exactly like all the other buttons in this tutorial, except that the Goto effect points to Muybridge (back to the previous scene). Congratulations, you are done with scene 2. Compare your results with Figure 5.

The Birth of Multimedia

These two scenes should provide you with the foundation you need to create an interactive, multimedia presentation on your Amiga. You will notice that although DeluxeVideo III is capable of controlling a laser disc player, I did not include one in this tutorial, opting instead to show off the Amiga's real power. Full-motion digital video generated from the computer's memory will probably replace the video disc. Let's show the other guys how to do it now—video disc. . .just say no.

To be effective in this age of short attention spans, you must keep your scripts interesting. Play a song, add sound effects, do a fancy wipe—anything to break the grip of static, text-based displays. The Amiga is a powerful multimedia machine—use that power! ■

Gene Brawn is a digital animator, graphics designer, television director, and a contributing editor to AmigaWorld. *Write to him c/o* AmigaWorld *Editorial Dept., 80 Elm St., Peterborough, NH 03458.*

Manufacturers' Addresses

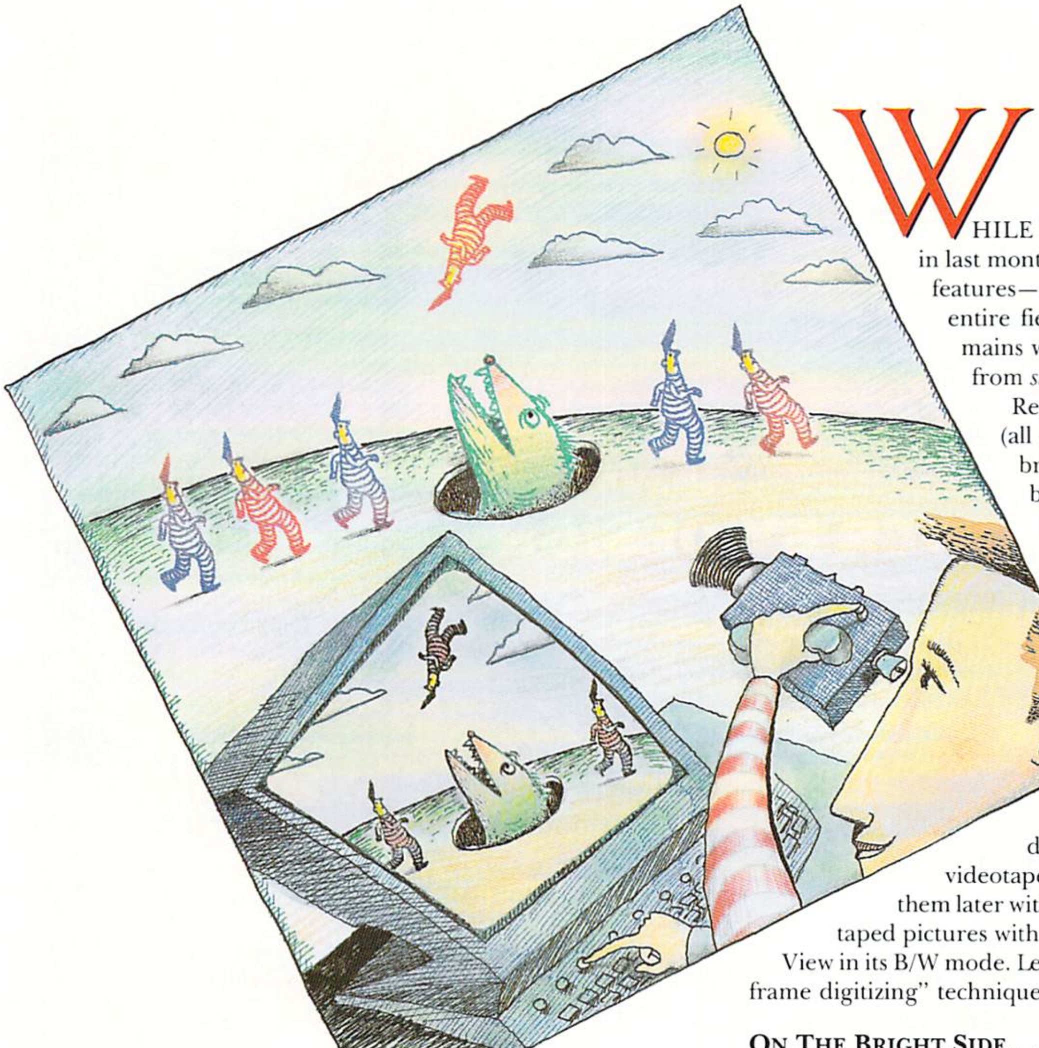
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Freeze Frame Digitizing

It's time to break out your favorite camcorder! You may be surprised to learn you can use slow-scan digitizers such as Digi-View to digitize images from sources other than photographs and "still-life" scenes.

By Barry Sonstroem



WHILE THE 4.0 release of Digi-View (reviewed in last month's issue, p. 22) contains impressive new features—adding exciting new dimensions to the entire field of slow-scan digitizing—the fact remains we are still talking about images derived from *stationary* source material.

Regardless of which version of Digi-View (all priced at $199.95) you have, there is a brief, often overlooked reference near the back of the NewTek documentation stating that you can "digitize still-frame video from a VCR or a laserdisc in black and white." What? Does this mean you really *can* capture *images* from videotape—without having to make the equipment investment in expensive frame-grabber solutions?

Yes! Although the manual offered no further explanation of that single reference above, by conducting a few experiments I discovered a way to digitize pictures from videotape in black and white (and "re-colorize" them later with a paint program) by freezing the videotaped pictures with VCR pause control and operating Digi-View in its B/W mode. Let's take a look at the basics of this "freeze-frame digitizing" technique.

On The Bright Side...

In order to use Digi-View, your image must remain motionless for the duration of the scan (5–20 seconds); therefore, when you digitize ►

ILLUSTRATED BY JOHN DYKES

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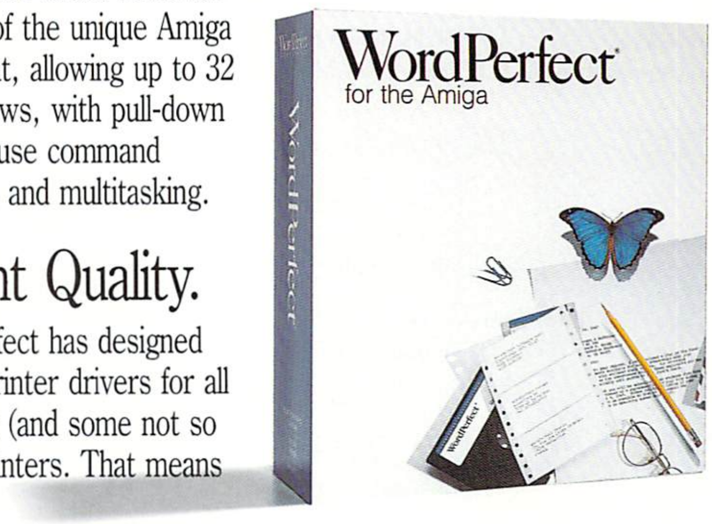
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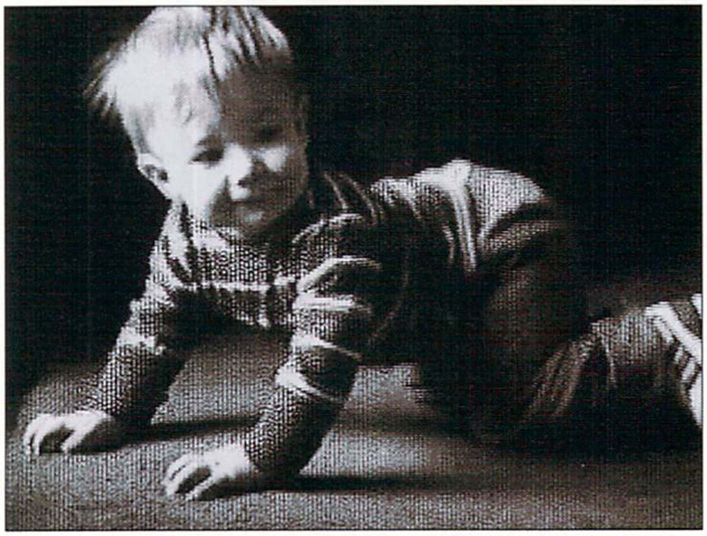
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an image from videotape, you must freeze it with the VCR pause button. Because the VCR sends a nonseparated color signal to the computer, your digitized picture will be black and white: Digi-View cannot build a color image from a nonseparated color signal; it adds color by combining separate color signals. For example, when you digitize a still-life or a photograph



You can get great results by freeze-frame digitizing your videos.

via a camera and a red/green/blue color filter wheel, you scan the image with each filter and then Digi-View combines the red, green, and blue components of the image to build a color picture. If you have the bucks to buy an electronic color splitter, it separates the red, green, and blue components of a color video signal. Digi-View then digitizes each component as before, and recombines them to create a color picture. If you cannot afford the added expense, however, run Digi-View in its B/W mode and then colorize the picture by loading the Digi-View file into a paint program that has colorize or tint capabilities and then setting the program to one of those modes.

With this inexpensive method, you can create high-quality color digitized pictures using only Digi-View, a VCR with a good pause mode, a TV (connected to the VCR's RF-OUT jack), a video cable with RCA plugs at each end, and your paint program. When you connect the hardware, make sure all equipment is turned off. First, make the standard VCR-to-TV connection with a short length of coax between the VCR Out-to-TV and the TV Ant-In jacks. This allows you to view a videotape on the TV and pause it at the frame you want to digitize. Next, plug the Digi-View module into the parallel port of the Amiga. Connect an RCA-to-RCA video cable to the module's Video-In jack with the other end plugged into the VCR's Video-Out jack. This cable sends the freeze-frame video to the Amiga for digitizing.

Now that you are set up, turn on all equipment and load a prerecorded video cassette into the VCR and the Digi-View software into the Amiga. When the Digi-View screen appears, pick a resolution compatible with your paint program if you later plan to add color to your digitized picture. After you select a screen resolution, a requester box with the message No Video Signal Present may appear on your monitor, because the VCR is not yet in Play mode. Simply click on Cancel to return to a blank screen.

When you digitize from a VCR, you must change some of the Control settings in the menu bar by pulling down the Control menu at the top of the screen and selecting Color. When the color-control screen appears, click on the B/W button in the Mode box at the top left of the screen. (Remember, even though the VCR sends the Amiga a nonseparated color signal, the computer digitizes it in black and white, so Digi-View must be set on B/W.) To achieve the best possible picture detail and clarity, click on the Camera box at the lower right of the screen. When the camera-control screen appears, set the Capture mode to 20 seconds by clicking on the 20 Sec Color Cam button. Click on the OK button and you return to the blank Digi-View screen.

Hot Maneuvers And Cold Storage

With the groundwork completed, the actual digitizing

Digi-Tips

IF YOU HAVE mastered the basics of freeze-frame digitizing, here are a few hints that will help you to maximize your talents:

- When you record scenes that you will later digitize, use the fastest recording speed for the highest tape resolution.
- Shoot medium shots or close-ups because distant objects are much harder to digitize and colorize.
- After you digitize a picture from the tape, release the pause button to reduce unnecessary head wear on the VCR.
- Learn the keyboard shortcuts for the Digi-View program and avoid constantly having to pull down the screen menus. □ *—BS*



process begins. Put the VCR in Play mode and watch the playback on the TV screen. Use the VCR pause button to freeze the tape at the scene you want to digitize. Pull down the Digitize menu and select a color. (Remember that Digi-View is in the B/W mode, so it doesn't matter whether you digitize in red, green, or blue—the results are virtually the same no matter which color you choose.) After a 20-second scan, a digitized black-and-white picture displays on the monitor. You manipulate the image by returning to the Color section of the Control menu and adjusting the brightness, contrast, and sharpness sliders. Click on Display to see the results of these adjustments.

After you experiment with the sliders and create your masterpiece, save the picture to disk by selecting Save from the Project menu. Have a formatted disk ready because a requester will ask you for a destination and name for the picture. If you plan to colorize your picture files, leave room on your disk because colorized versions take up more disk space than black-and-white versions. For example, about 30 full-screen 320 × 200 black-and-white picture files fit on an empty disk, but only about 22 pictures fit if you colorize the images with three colors.

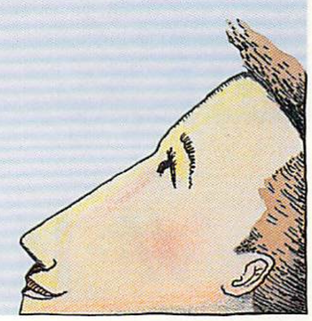
Now load your paint program, set it to the Tint or Colorize mode, and then load in the black-and-white picture. For the best results, follow the paint program's colorizing instructions and keep the colorizing process as simple as possible. You can achieve amazing results by adding just a few colors to the picture's main subjects, leaving the background in black and white, or erasing it entirely with the paint program.

Becoming familiar with this "frame-grabber" technique may take some time, but it should help all Digi-View users to expand their digitizing horizons. ■

Barry Sonstroem is a freelance writer who specializes in computer graphics and video. Write to him c/o AmigaWorld *Editorial Dept., 80 Elm St., Peterborough, NH 03458.*

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16

A continuing series of tips, techniques, and tricks for creating more imaginative Amiga graphics.

By Joel Hagen

Claymation in 2-D

THIS COLUMN HAS explored several animation methods in the last few months, including cel animation with The Director (Right Answers Group), light-table simulation with DeluxePaint III (Electronic Arts), and color-cycling techniques (just last month) with DPaint and other paint programs. This month I will discuss an animation approach that could be called "Two-Dimensional Claymation." Claymation is a technique in which a clay figure is altered slightly between each filmed frame. The result is a three-dimensional figure that moves and makes complex facial expressions. The now-famous California Raisins are a product of claymation.

DPaint's Smear mode provides the animation tool for my computer version of this method, but the image begins its life in Digi-Paint 3 (NewTek), or any other HAM (Hold-and-Modify) paint program. The Amiga's 4096-color HAM palette lets me quickly paint characters with rounded, highlighted features, while DPaint III provides the powerful animation tools. The HAM image is brought into DPaint via PIXmate (Progressive Peripherals & Software), Transfer 24 (NewTek), or any other software that can convert a HAM image to 32 colors. This is a good exercise in using several pieces of graphic software on a single project, and it is a very fast way to produce interesting animation.

Go Ahead, Paint Your Face!

The face in the illustration was painted in Digi-Paint 3 using the method described for Photon Paint (MicroIllusions) in the Jan. '90 *Accent* column (p. 40). This technique is simple enough for any beginner, yet it produces images of complex color and subtle shading. This time, I will present the procedure in terms of Digi-Paint's interface, and use it in a way that emphasizes a 3-D quality. For the entire face, I used only two colors, a flesh tone and a dark reddish brown. Both are in the default palette. The idea is to paint in transparent, highlighted layers using the Filled Freehand shape setting ("d" on the keyboard). Set painting mode to Normal and go to the Transparency Controls. Select the Point hotspot. Set the left slider halfway down to make the center, or Hotspot, of any drawn shape 50% transparent. Set the right slider all the way to the bottom to make the Edge of that shape 100% transparent. Select Random dither, and you are ready to paint. Use the flesh color if you want to try a face like the elf character in my example.

I built him up quickly by drawing blobs on a black screen corresponding to the sculptural masses of cheeks, chin, nose, forehead, and so on. Smaller blobs made brows, lips, and other details. The Hotspot and Edge settings (like a low bell curve in Photon Paint's Blend requester) let the color saturation of an area build up in soft-edged layers. The Hotspot setting automatically creates the illusion of a light source illuminating rounded masses. You can enhance shadows by keeping the same settings, but switching to the dark-brown color. Trace the outline of a shadow area, and it darkens as Edge transparency blends it smoothly into the face. The eyes are large dots set in as solid colors, transparency zero. Save the image to disk and Quit.

Transfer 24, bundled with both Digi-Paint 3 and the Digi-View hardware, serves as a powerful accessory to the paint program, allowing image processing and adjustment of resolution and palette. In order to animate the elf face in DPaint, the image must be reduced from HAM to 32 colors. Because of the limited palette used, this change will

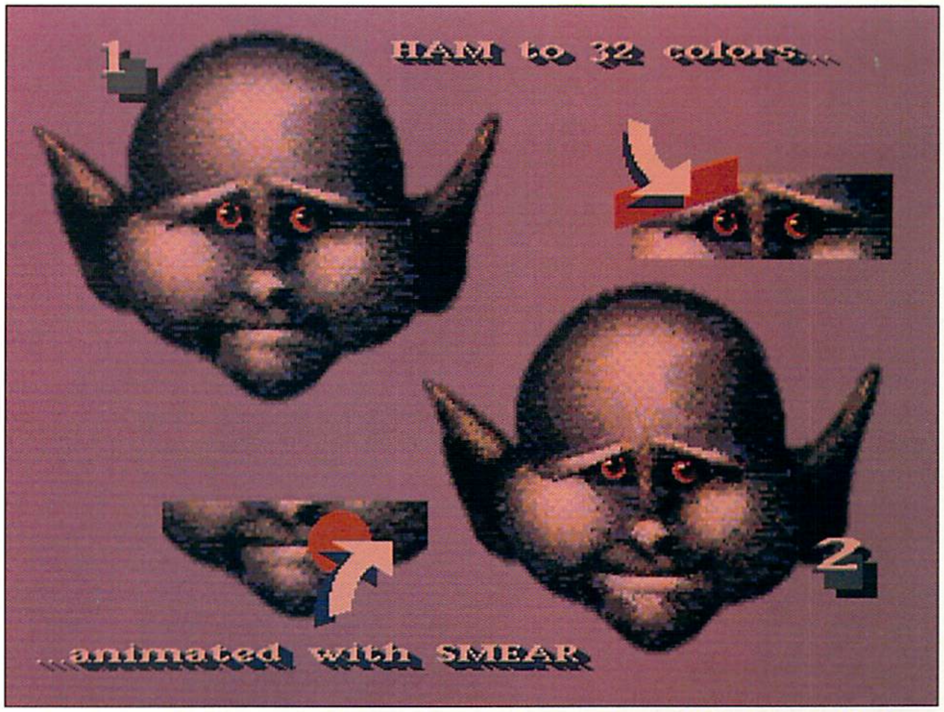
This nifty HAM painting/animation combo brings a new wrinkle to the technique that made those "California Raisins" famous.

barely be noticeable. Load the image into Transfer 24 and go to Controls. Click Dither Off, and select 32 Colors. In PIXmate, you would Load the picture, then select HAM>32 from the Color menu. This redisplays the elf accordingly, so that you can save it before quitting the program. Now run DeluxePaint III and load the image to begin animation.

If it seems to the reader that I have gone a long way around to wind up with an image in DeluxePaint, remember that this style of painting is unique to HAM mode. Part of my point is that HAM styles need not be excluded from DPaint's superb animation tools.

Facial Expressions

Load the 32-color version of the face into DPaint. The animation will be built a frame at a time from each preceding frame. This image will be frame 1. In the menu go first to Anim, then to the submenu Frames, and then to Add Frame. A glance at the upper-left corner of the screen shows that frame 2 of a two-frame animation has been created and is being displayed. The number 1 and 2 keys will roll the animation frames back and forth. At the moment, of course, the two frames are identical. As a first experiment, try making five or six frames of the face lowering its eyebrows and grinning.



ElfPage shows a DPaint screen with the elf image (#1) reduced from a HAM painting to 32 colors. Brushes are shown with arrows indicating the direction they are moved with the Smear mode. Elf #2 shows the results of Smear. The brows are as they should look after one frame of adjustment, and the mouth shows the cumulative effects of five frames of adjustment.

To make the face grin, use a large round brush as shown in the illustration. The + and − keys will make the brush as large or small as you like. Hit the F4 key for the Smear mode and the "v" key for the straight-line tool. Place the brush on one corner of the mouth and drag a short line toward the edge of the face. (Enabling Fast Feedback in Prefs is a good idea at this time.) Release the mouse button and observe the effect. You are striving for a clean shift in the features with no obvious streaking of pixels. If these streaks are present, hit Undo and try again with a shorter line. You may have to stretch the features in a few short stages to avoid streaking. The brows in the illustration were moved using a freehand brush cut to the right size and angle as shown.

Smear moves the chunk of image that is under the brush. If you do this carefully, you can change features gradually, frame by frame, without losing the original character of the shading and dithering. When you finish a frame, go back to Anim and add another frame. This automatically duplicates the new image to the next frame to be modified again. Continue the process as long as you like. Best results come from very gradual adjustment of each frame. Experimentation will clarify the technique. This is also a great way to manipulate digitized photographs. So, if you can't draw a good face, collaborate with Leonardo da Vinci and see if you can bring a grin to the Mona Lisa. ■

Joel Hagen's credits include work in art, astronomy, science fiction, and software development. Write to him at 10512 Sawyer, Oakdale, CA 95361. Please include a stamped, self-addressed envelope.

Back to Basics Part 5

There's more to the Shell than meets the eye as our AmigaDOS experts dust off some old tricks that turn the novice into a pro.

By Mark L. Van Name and Bill Catchings

WHEN WE ABANDONED the security of the Workbench last month for the uncertainty of the Shell and its command-line interface, you may have been a bit nervous. Don't worry: You already know how to start it and how it uses directories and files to store and organize information. Now we'll teach you commands that make working with those files and directories a snap.

SHELL WE GET STARTED?

First, bring up the Shell by using the procedure described last month (p. 52). (Although the Shell works in any size window, make it fill the entire screen because you see more of the results of each command.) The orange box just to the right of the Shell's "1>" prompt is the cursor and it marks your current position on the line. The command you type on this line activates a corresponding program file already contained within AmigaDOS. Remember, you may type the commands with any combination of upper- or lowercase letters.

For your first command type

DIR

Because DIR is an abbreviation for directory, it displays the names of the files in the current directory. (Remember the Shell functions like the Workbench; just as you work in only one Workbench window at a time, you input commands into only one Shell at a time.) When you execute the command by hitting the Return key (which, it is understood, you will do after entering *any* command), a list of the files included on your Workbench disk scrolls down the screen. (To access further information about a file, such as its size, status, and previous access date, you can type

LIST

but we will discuss the differences between the DIR and LIST commands in a future article.)

Now that you are feeling more at ease, we will show you some tricks that will save you a lot of time and help you execute commands much more quickly. By hitting specific keys, you can recall commands from the Shell's "history buffer" (the sequential chain of your previously entered commands). The history buffer holds 2048 bytes (2K), or characters, of previously entered commands. Exactly how many commands fit in 2K depends on the length of your commands, but, in general, the number should be several hundred. The Shell keeps the history buffer in your Amiga's memory, and it lasts only as long as your Shell session: Exit the Shell or reboot your Amiga, and your history buffer vanishes.

To re-enter your last command, you need only hit the Cursor Up (↑) key. If you do this now, LIST (the last command typed in our previous example) appears; if you then hit RETURN, you once again scroll through the list of files and directories. Even though typing LIST is not too strenuous even for the worst of typists, some commands are long, and this shortcut is handy. If you hit Cursor Up twice, DIR (the next-to-last command you typed) appears. In general, when you continuously hit Cursor Up, the Shell takes you through the previous commands in reverse chronological order. When a blank line appears, you have reached the end of the chain. When you press the Cursor Down key (↓), you move forward through the chain. If you continue to hit Cursor Down, you move in chronological order through all of the commands that you previously entered. When you hit the Cursor Down key enough times, you end up at a blank line; once again, you have reached the end of the chain.

SHORTCUTS THROUGH HISTORY

If you wish to go to the beginning or end of the history buffer from any point in between—without having to scroll through commands one at a time—there

Continued on p. 51

from p. 48

are shortcuts. To reach the beginning of the chain, simply hold down either Shift key and press Cursor Up. To reach the end, use the Shift key with Cursor Down. You can also move to the bottom of the chain with the CTRL-B command. ("CTRL-hyphen-B" is standard computer shorthand for pressing the CTRL [Control] and B [for bottom] keys simultaneously.) Becoming familiar with such multikey combinations is very useful because you encounter them frequently, both in the documentation for the AmigaDOS Shell and in the manuals for many other Amiga software packages.

In addition to moving through the history buffer one command at a time, you can also search for a specific command. Say you want to recall a particular DIR command, but do not want to search the history buffer one line at a time. Move to the bottom of the chain and type

DI

(or any other prefix of the command line you want). If you press either SHIFT-Cursor Up, or CTRL-R (for Recall), the Shell goes back through the history buffer until it finds the command line. Once you are on that line, either press RETURN to execute the command or continue to move around in the history buffer via the cursor keys. If no command line in the chain begins with the prefix you entered, the Shell blanks it out, and you are back where you started.

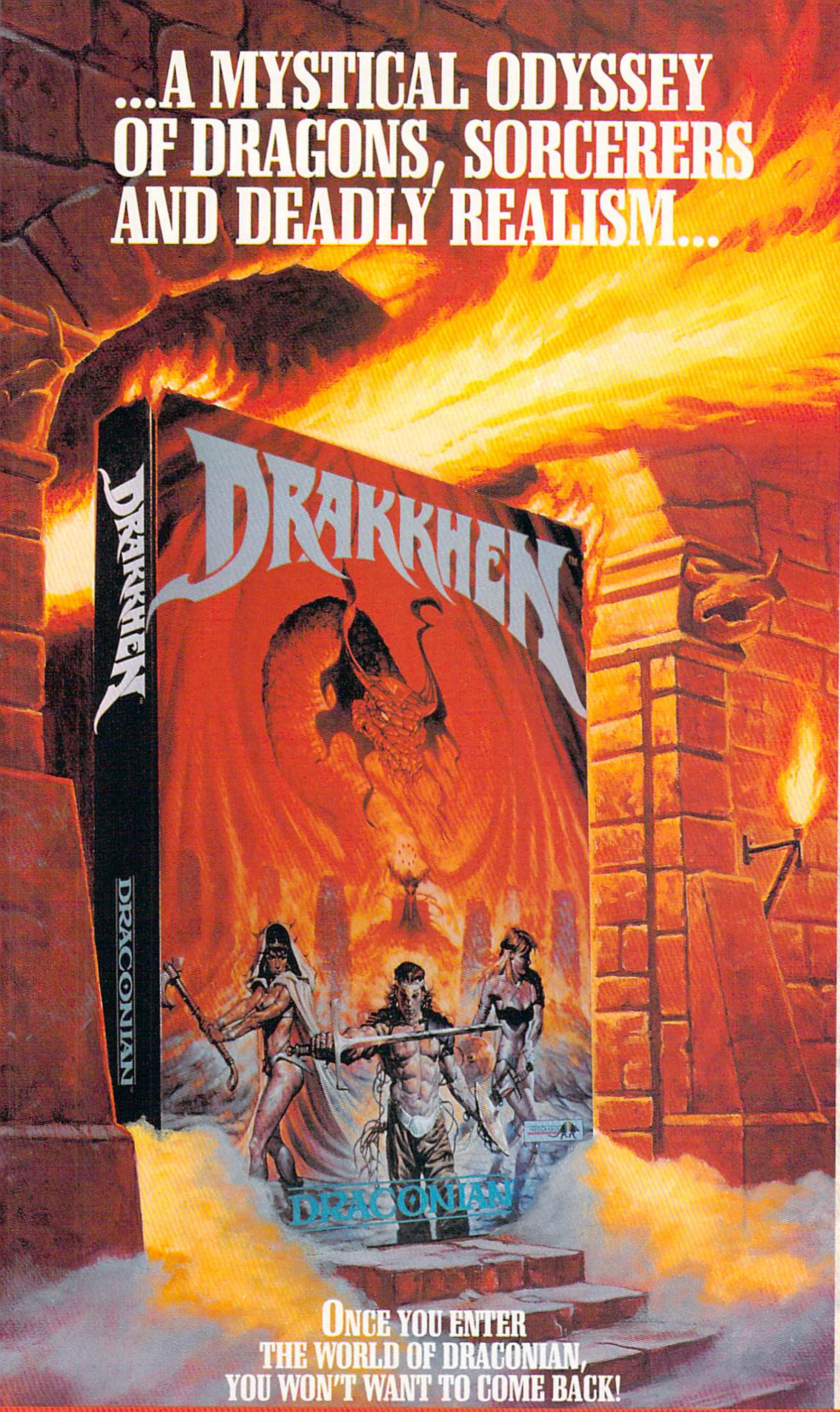
If after repeated attempts you discover that no previous command is exactly what you want, you can find one that is close to what you want and then edit it into shape. We will discuss the Shell's command-editing options next month. But for right now, we need to invoke the "Say Goodnight Gracie" command to get us out of the Shell (and this column). Type either

ENDSHELL or ENDCLI

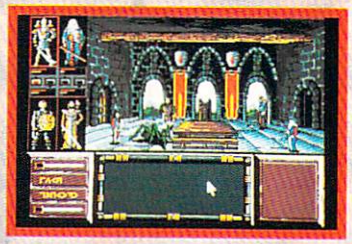
press RETURN, and you are back in the Workbench.

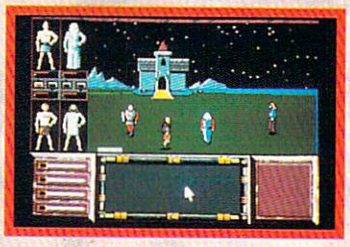
Keep practicing these commands and multikey combinations until next month, and, remember, if you become master of the Shell, you are no longer a novice. ■

Mark L. Van Name and Bill Catchings are contributing editors to AmigaWorld. *Write to them at 10024 Sycamore Dr., Durham, NC 27703.*









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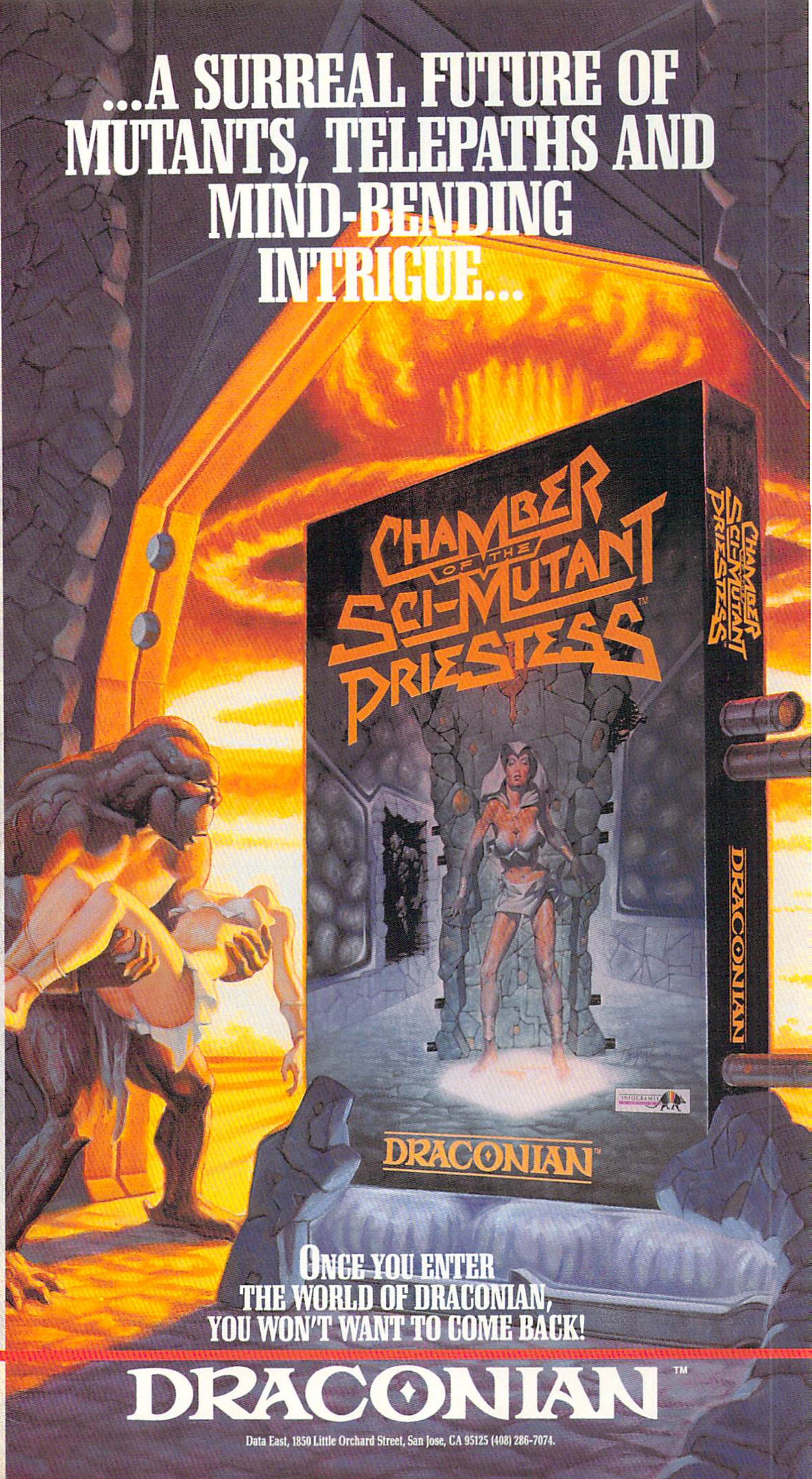
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POINTERS

Information and Ideas on Amiga Programming

Monitoring the ExecBase For Efficiency

By Eugene Mortimore

ALL AMIGA PROGRAMS should take maximum advantage of all current system-specific hardware and software resources. To do so, your programs should optimally configure themselves upon startup, and thereafter adapt continuously to a possibly changing hardware and software environment. You must, in effect, write one program that adapts itself to complex and changing circumstances. The hardware environment largely determines how your program initially configures, while the continuously changing software environment affects the way your program branches when executing.

To help you achieve this goal, the Amiga system software contains a hidden set of system-wide internal routines that constantly gather information about the current state of the system. The routines detect all hardware and software in the system at bootup, and they initialize the appropriate system-wide parameters to reflect this *initial system state*. They then continue to gather and update the system parameters to reflect the *current system state*.

Your programs should monitor a subset of these machine-specific system parameters to execute at maximum efficiency. For example, all programs need to know which CPU is present; most must be aware of the amount of internal and external memory available; and some need to keep track of which shared libraries are currently in the system. As a special case, programs intended for both the US and European markets need to check the machine's power-line frequency.

SYSTEM BOOKKEEPING

Each shared library in the system has a structure that provides it with a bookkeeping mechanism for the current machine state. For example, the Graphics library uses the GfxBase structure, the Dos library uses the DosBase structure, and the Intuition library uses the IntuiBase structure. These bookkeeping structures provide vital clues to hidden software mechanisms and useful insights into important system parameters that your program can read (and sometimes write) to enhance its performance.

We will concentrate on the most fundamental book-

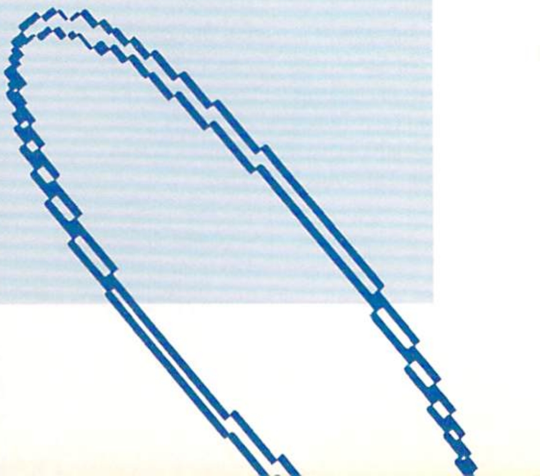
Continued on p. 58

LISTING 1

```
#include <exec/types.h>
#include <exec/exec.h>
#include <exec/execbase.h>
#include <stdio.h>

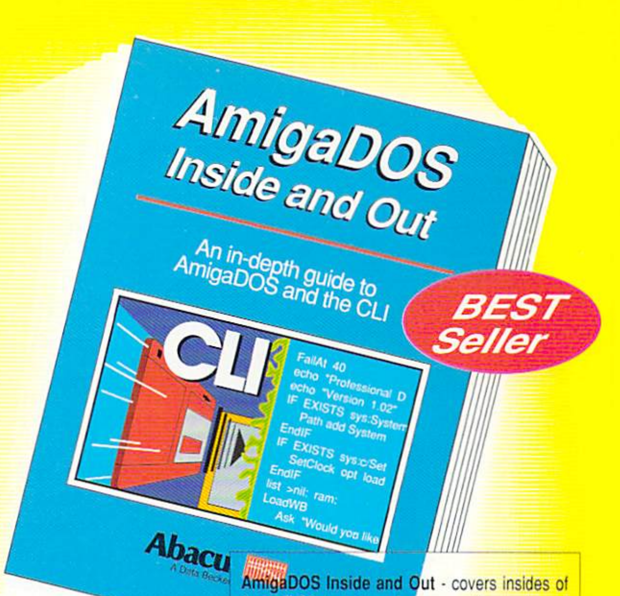
#define SIZES 16
#define MINSIZE 3
#define MAXSIZE (SIZES + MINSIZE - 1)

struct ExecBase *SysBase
main()
{
    shor  size_frequency[SIZES];
    struct MemChunk  *memChunk;
```



We Sell Know How

If you use an Amiga and you want to know how, just read on...



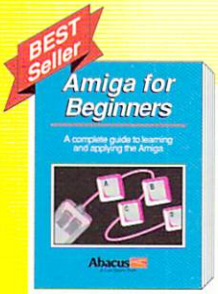
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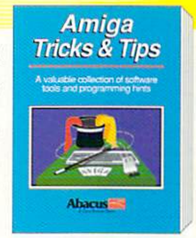


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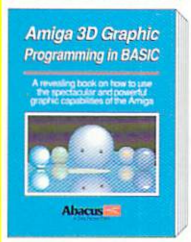
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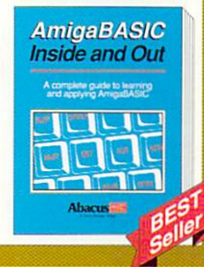




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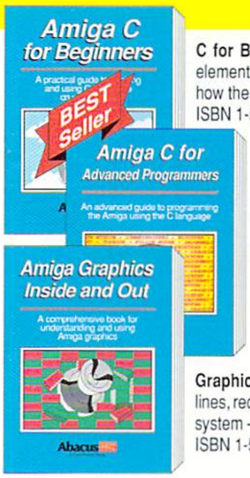
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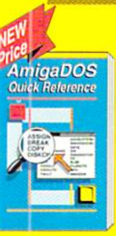
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```
    struct MemHeader *MemHeader;
    struct Node *node;
    short index;

    printf"SysStackUpper Address             %lx\n", SysBase->SysStackUpper);
    printf"SysStackLower Address             %lx\n", SysBase->SysStackLower);
    printf"MaxLocMem Address                 %lx\n", SysBase->MaxLocMem);
    printf"MaxExtMem Address                 %lx\n", SysBase->MaxExtMem);
    printf"Quantum task-switches/sec         %lx\n", SysBase->Quantum);
    printf"DebugEntry Jump Address           %lx\n", SysBase->DebugEntry);
    printf"TaskTrapCode Jump Address         %lx\n", SysBase->TaskTrapCode);
    printf"TaskExceptCode Jump Address       %lx\n", SysBase->TaskExceptCode);
    printf"TaskExitCode Jump Address         %lx\n", SysBase->TaskExitCode);
    printf"AttnFlags bits                    %lx\n", SysBase->AttnFlags);
    printf"VBlankFrequency c/sec             %lx\n", ysBase->VBlankFrequency);
    printf"PowerSupplyFrequency c/sec        %lx\n",
SysBase->PowerSupplyFrequency);

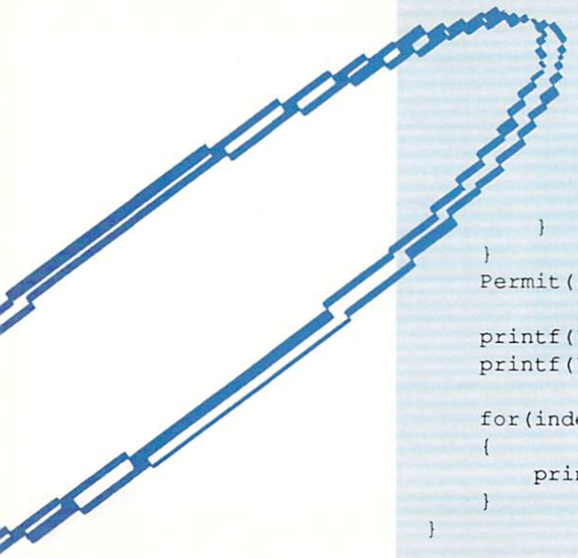
    Forbid();
    for(node = (struct Node *)SysBase->LibList.lh_Head;
    node != (struct Node *)SysBase->LibList.lh_TailPred;
    node = node->ln_Succ)
    {
           printf("Library Name %s\n", node->ln_Node0;
    }
    Permit():

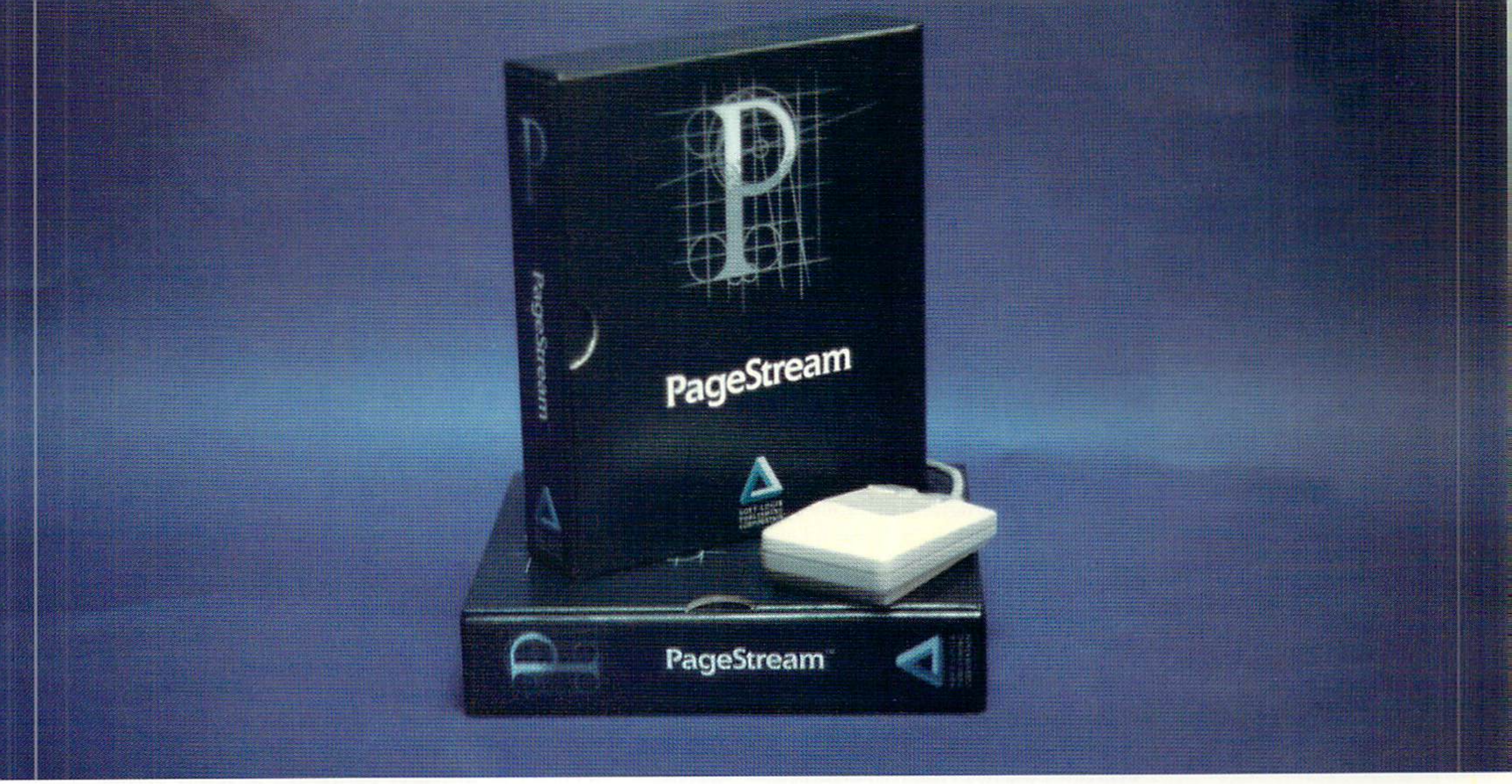
    for(index = 0; index < SIZES; index++)
    {
        size_frequency[index] = 0;
    }

    Forbid();
    for(MemHeader = (struct MemHeader *)SysBase->MemList.lh_Head;
    memHeader->mh_Node.ln_Succ;
    memHeader = (struct MemHeader *)memHeader->mh_Node.ln_Succ)
    {
        for(memChunk = MemHeader->mhF; memChunk; memChunk = memChunk->mc_Next)
        {
            for(index = MAXSIZE; index >= MINSIZE; index--)
            {
                if((1 << index) & memChunk->mc_Bytes)
                {
                    ++size_frequency[index - MINSIZE];
                    break;
                }
            }
        }
    }
    Permit():

    printf("\nCurrent Free-memory-chunk-size Frequency Distribution:\n\n");
    printf("   Size  Frequency\n");

    for(index = MINSIZE; index <= MAXSIZE; index++)
    {
        printf(" %6ld: %4ld\n", (1 << index), size_frequency[index - MINSIZE]);
    }
}
```





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from p. 54

keeping structure, that masterlord of the entire system: the Exec library ExecBase structure. For reference, print a copy of the 50-parameter ExecBase structure in the execbase.h include file.

At any time, the ExecBase structure provides a global picture of most of the hardware and software system's important characteristics. Some of its parameters are continuously changing and are background-updated by the hidden Exec routines. For example, the LowMemChkSum, ChkBase, and ChkSum parameters are present solely to provide internal memory integrity checks on the system; the system monitors these parameters and your program will rarely be concerned with their current values. By the same token, your program routines will usually not be writing new values into ExecBase structure parameters.

The hidden Exec routines sense and characterize the user's hardware system, then build the Amiga software system from scratch each time the user boots up. Most results of this process are reflected in the ExecBase parameters that exist at the end of the bootup sequence. Any program can read these initial structure parameters (and configure itself) before proceeding further. If your program needs to examine any of the system-wide lists (the Library list, the Device list, the Memory list) they are always kept current in the appropriate ExecBase structure parameters.

The hidden Exec routines automatically place all initially added shared libraries (the Exec library, the DOS library, the Graphics library, and so on) on an ExecBase structure list. At the end of the bootup sequence, the ExecBase library LibList parameter represents a List structure that contains the current library list. Via a list-reading loop, your program can determine which libraries were added to the system.

Each time the system deletes (or adds) a shared library from the system library list—for example, to gain more memory—or a concurrent program deletes (or adds) a library, the Exec internal routines automatically unlink (or link) that library into the ExecBase library list. The same applies to devices, resources, message ports, and so on. You can see why some of the ExecBase structure parameters are constantly changing as groups of programs enter the system and cooperatively multitask.

AUDITING THE BOOKS

Listing 1.0 is a short program that reads and displays 15 of the 50 ExecBase structure parameters. First, compile and execute the program on your machine, then try to interpret the results in terms of your system's hardware and LIBS directory contents. Here are the parameters it examines:

- **SysStackUpper** and **SysStackLower** are the upper

and lower addresses of the system's supervisor 68000 CPU stack.

• **MaxLocMem** and **MaxExtMem** are the maximum addresses of the machine's internal and external memory, respectively. Your program can read these values to decide if a user's machine has enough memory for it. If necessary, you can then alert the user if insufficient memory is available.

• **DebugEntry** is the ROM entry point address of the start of the RS-232 9600 baud serial-port RomWack routines. A set of debugger routines in ROM, these functions are primarily used for examining data structures after a program crash. Exec assures that the state of the machine is frozen after the crash.

• **TaskTrapCode, TaskExceptCode,** and **TaskExitCode** are the ROM entry-point addresses of the current task's trap, exception, and exit code. The system will jump to these addresses automatically when such events occur. Any address that starts with 0x0000FC will be in the Amiga's ROM.

• **Quantum** is the number of task-context switches performed per second. Your program can change this value by writing a new value into the Quantum parameter, thus altering the frequency of task switching.

• The **AttnFlags** parameter provides a good illustration of how the hidden Exec routines first determine and then write initial values into ExecBase structure parameters. AttnFlags is a collection of bits that represent specific processors in the system. If a machine has a 68020 CPU, AttnFlags would be AFF_68020; a machine with both a 68020 CPU and a 68881 FPU would yield a ORed combination of the AFF_68020 and AFF_68020 bits—as defined in the execbase.h include file. A program written for all machines in the 68000 through 68030 range must determine what processor is in each user's machine and then execute only the appropriate assembly-language instructions to use the processor to maximum advantage.

• **VBlankFrequency** is the vertical blanking frequency in the system, while **PowerSupplyFrequency** is the power-supply frequency in the system. This value would be 50 for a European PAL machine.

Study the possibilities carefully, then extend my program to devise a strategy appropriate to your own program's needs. ■

Eugene Mortimore is the author of Amiga Programmer's Handbook, Vols. I and II, *and is a registered Amiga developer. Write to him at 2620 Center St., Bethel Park, PA 15102.*

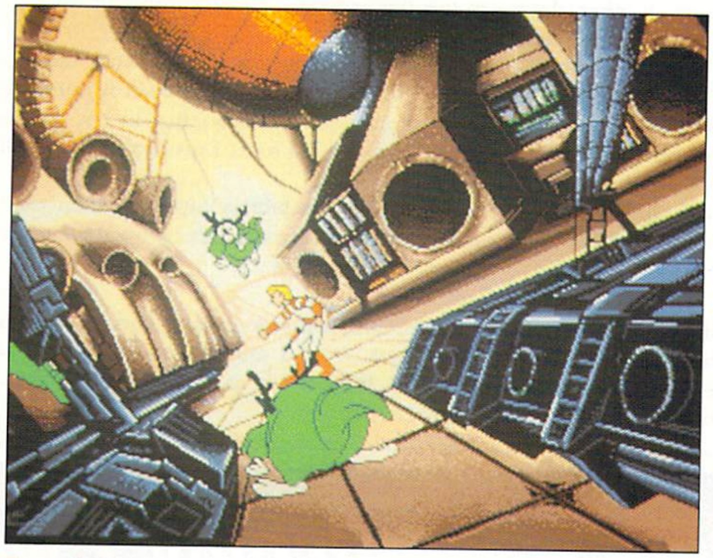
THE GAME PRESERVE

Space Ace

By Michael Totoro

IF YOU ARE a Saturday morning cartoon addict as well as a computer gamester, Space Ace, a four-disk cartoon adventure, will turn you into a video vegetable. Complete with digitized sound effects, breath-taking graphics, and amazingly fast disk access, this game is an irresistible temptation. I became so engrossed watching the scenes unfold that I forgot to move!

As Dexter, or his alter ego, Space Ace, you must rescue the fair Kimberly from the evil clutches of Commander Borf and then prevent him from conquering the earth with his Infanto Ray, which turns adults into infants. During each scene, Dexter is placed in at least three life-threatening situations where he has only five options: move left, right, up or down, or fire his blaster. If you select the proper move at the correct time, Dexter continues his mission; screw up, and you're dead meat.



Trapped! Where would *you* turn?

Novice players may be frustrated by having only three lives to complete the 33 scenes. But, as you begin to get your timing down, this frustration becomes a challenge. At all levels of expertise, the save feature comes in very handy.

If you have nerves of steel and you crave cartoon adventure, Space Ace is the game for you. If you don't have the persistence of a twelve-year old, however, consider yourself warned or just stay away! *($59.95, ReadySoft Inc., 30 Wertheim Court, Unit 2, Richmond Hill, Ontario, Canada L4B 1B9, 416/731-4175. No special requirements.)*

Teenage Mutant Ninja Turtles

By Peter Olafson

IN TEENAGE MUTANT Ninja Turtles, you control four grimacing amphibians with Soloflex muscles and Zorro masks as they try to rescue their non-turtle chum, April, from Shredder, and transform their rat-friend, Splinter, back into a man. Their path from the Fifth Avenue Sewers to the South Bronx is strewn with various martial arts weapons to make the rescue easier. Although these green ninjas are the stars of hot cartoons, comics, and breakfast cereals, they unfortunately left my joystick barely warm.

The game has only a few good qualities—six multi-segment levels with tough end-of-level and mid-level bosses, an option to switch play among the four turtles, and an information and hint screen. The ►

Crib Notes

By Peter Olafson

MAKE A KILLING in new Phlan! Wanted: Pathologically aggressive young people for six immediate openings with high earning potential. Stimulating work environment. Must enjoy traveling and meeting people, and not be squeamish about slicing them to ribbons should they prove disagreeable.

The fathers Phlan—pronounced like the custard, although they are rather less sweet—want the usual cabal of fighters, thieves, clerics and mages to reclaim monster-laden sections for a bounty in *Pool of Radiance* (Strategic Simulations Inc., $49.95). This is no small task, as Phlan and its happy environs are approximately the size of the Western Hemisphere. So, grab your role-playing gear, and I'll be along in a sec.

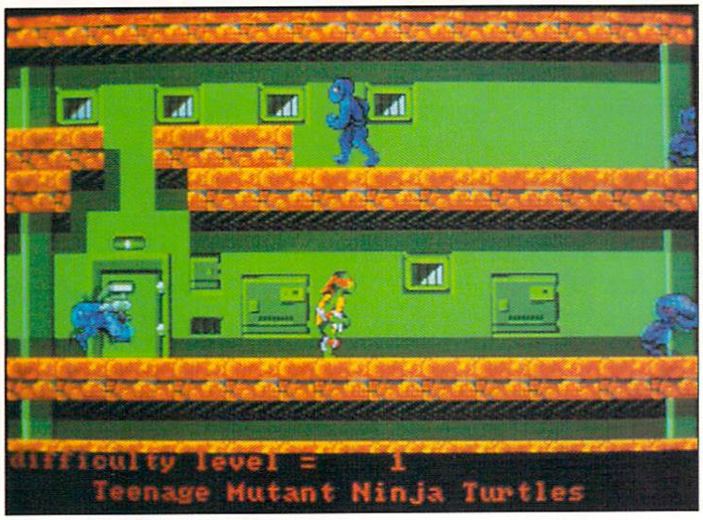
• We'll start downtown in the "civilized" section of Phlan—no monsters here, although the city watch does a spiffy monster imitation if provoked. Do not provoke them (except in the name of science) by acting the part of the unrepentant vagrant or housebreaker. (There's really no need to go breaking into places. Poking your heavily-armored nose around will turn up a 24-hour weapons store, though it doesn't exactly hang out a sign.)

• The Slums should be no problem if you have a balanced and reasonably well-equipped party. Here and elsewhere be thorough in your searches. The eastern section contains the nastier encounters; use sleep spells to tie up the archers and flankers. You may want to avoid meeting the trolls and ogres in the old Rope Guild until later in the game. The trolls have a nasty habit of standing back up and grinning at you, so you'll need to kill them all around the same time, and then stand ►

game is also one of the few I've seen that incorporates momentum: You can't change the character's direction in mid-air. Jumping teenage mutant ninja turtles must be moving in the direction of the jump when they leave the ground.

Otherwise, the game is unrad, dudes. The humor that seemed implicit in the turtles' creation—a twist on 1950s' movie titles—has been lost. Much of the turtles' flash is gone, too. Although the graphics are colorful, they have a blocky, inexpressive look that makes them barely adequate. The outdoor, overhead shots of the multi-directional scrolling streets are downright Nintendo-esque. The indoor and underground scenes are only a notch better. The music is equally uninspired, and rather boopy and bleepy for the Amiga.

Game control isn't much better. Joystick response is



Reptilian humor and heroics.

sluggish, and while you can save a game, you must reboot to restore. Rebooting brings you back to the copy protection. While I can't begrudge Ultra its password system, the passwords are not only impossible to photocopy, but difficult to read even under bright light.

The only quality that distinguishes this game from the dozens of others is that the lead is played by. . . well, turtles. I can't recommend that anyone shell out for this turtle soup. *($44.95, Ultra Software Corp., 900 Deerfield Parkway, Buffalo Grove, IL 60089-4510, 708/215-5111. Joystick required.)*

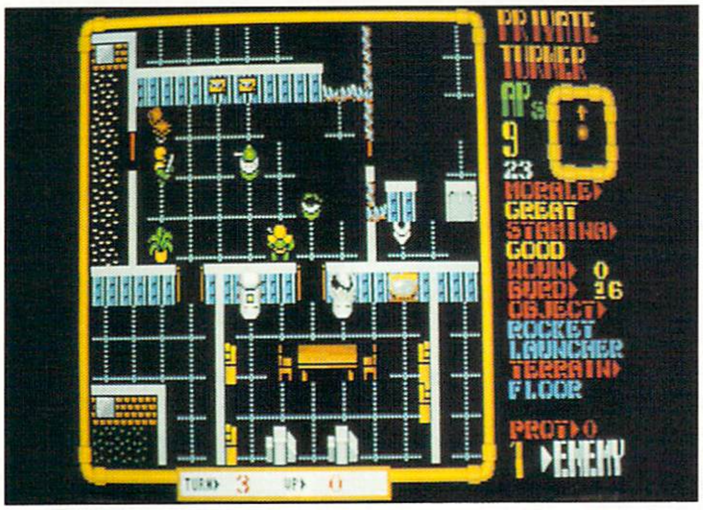
Laser Squad

By Rob Lawrence

TAKE THE FAST-PACED action of any arcade game, add to it the intuitive strategy of a warfare simulation, and you have a new type of strategic combat play, called Laser Squad.

You command an elite team of warriors who wield high-tech weaponry of your choice. The mission objectives vary, depending on which of the five scenarios you select in the beginning. The rules are simple: kill or be killed, protect your best man, and never forget to watch your backside.

The warriors' moves are limited by the number of action points they have, so plan your strategy carefully. Certain tasks require more points than



If you can't outshoot your foes, outsmart them.

others. For instance, if you open a door, you use more points than if you turn

around. Firing a gun often requires more points than you have left, leaving you open to

on top of them.

What do you want to kill the fortune-teller for? How do you treat your grandmother? Her reading is valid enough, and you've been asked to kill monsters, not gypsies. Oh, go ahead, waste her. Just don't blame me for what the monsters do.

- Sokal Keep: Undead seem to be everywhere, don't they? Does that document you found with the corpse look even vaguely familiar? If not, save and reboot a couple of times, and you'll get the idea. (If you're saying "What corpse?" poke around the entryway.) Perhaps you can parlay this scrap of paper into something useful.

- Kuto's Well: If you find nothing down there, you're not looking hard enough. Once its occupants are vanquished, the well is a nice place to hang loose without retreating all the way back to the civilized area to heal up. Because this was a den of thieves, look around for ill-gotten gains.

- Podol Plaza: This is more or less self-explanatory. You're on an espionage mission, so act the part. As you'd expect, the location of the weapons auction you're reporting on is central. (The auction will start when you find it.) If you're just passing through, you can avoid most combat by staying around the edges of the plaza.

- Mendor's Library is easy enough, if one of your mages memorized the "knock" spell. Otherwise, this may be a short expedition, as the doors have been sealed magically. Stay in "search" mode all the way through, as there's a lot to uncover. It'll probably take several rounds of the stacks before you find every book you can. If some of your treasure sounds a bit odd, well, reflect on it a bit.

- To the reader who is stuck for the right lines to allow the professor and girl to let him take the controls of the blimp in the kick-off episode of *Rocket Ranger* (Cinemaware, $49.95): Er, what are you doing on the blimp? It takes up time better spent elsewhere. You'll crash anyway, and the

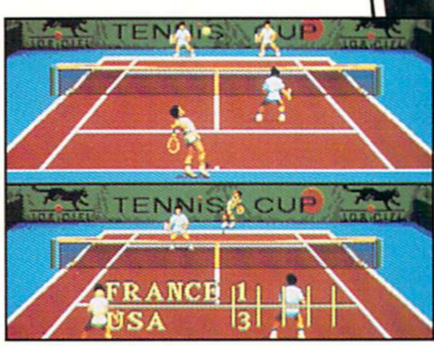
Continued on p. 70

It's match point in the finals and you're losing...



You're down Love-40 and must break the Australian's serve to survive. He blasts a fierce serve to your forehand. You return with a top spin drive to the crosscourt and rush the net. A lob soars toward the far corner, but you backpeddle and explode with an overhead for the point. Only four more to go...

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- Deluxe Paint III ... 99
- Deluxe PhotoLab ... 104
- Deluxe Print II ... 61
- Design 3D ... 69
- Digi-Droid ... 74
- New! Digi-Mate III ... 31
- Digi-Paint 3.0 ... 63
- Digi-View Gold 4.0 ... 131
- Elan Performer ... 43
- Fancy 3-D Fonts ... 55
- Font-Works ... 67
- Frame Grabber SW ... 74
- Interchange ... 40
- Interchange Object ... 15
- InterFont ... 82
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- Opticks ... Call
- PageRender 3D ... 108
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- Photon Paint Expansion ... 23
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- Sculpt-Animate 4D ... 399
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- Terrain Disk ... 22
- Turbo Silver ... 109
- Turbo Silver Conversion ... 15
- Turbo Silver Video ... 30
- Vid Gen ... 99
- Videoscape 3D 2.0 ... 122
- Wrap Session ... 59

VIDEO

- Abacus Desktp Vid Book ... 18
- Animagic ... 66
- Animation: Editor ... 40
- Animation: Effects ... 35
- Animation: Flipper ... 40
- Animation: Multiplane ... 69
- Animation: Rotoscope ... 53
- Animation: Soundtrack ... 89
- Animation: Stand ... 35
- Animation: Video Titler ... 44
- Animator: Apprentice ... 225
- Animotion ... 67
- Broadcast Titler ... 199
- Caligari Consumer ... 185
- Deluxe Productions ... 129
- Deluxe Video 1.2 ... 84
- Deluxe Video III ... 106
- Digi-Works 3D ... 90
- Director ... 45
- Director Toolkit ... 28
- Director Video Tutorial ... 31
- Easy Titler ... 34
- Fantavision ... 39
- Invision Plus ... 199
- Lights Camera Action ... 58
- Movie Setter ... 68
- Movie Setter Data Disks ... 24
- PageFlipper F/X ... 101
- Photon Vid. Cel Animator ... 108
- Photon Vid.Transporter ... 215
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- TV*Show ... 74
- TV Text Professional ... 112
- Video Effects 3D ... 142
- Video Titler v1.1 ... 99
- VIVA! ... 140
- Zoetrope ... 92

CAD

- A Cad ... 146
- Draw 2000 ... 149
- Home Builder's Cad ... 139
- Home Builder's Choice ... 55
- New! Home Builder's Library ... 34
- New! Home Builder's Print ... 79
- IntroCAD ... 63
- Professional Draw ... 129
- Structured Clip Art ... 38
- New! Ultra Design ... 229
- X Shell Pro ... 139
- X-Cad Designer ... 112
- X-Cad Designer Pro ... 339

ART & FONTS

- New! Airships ... 32
- Aircraft Pics ... 36
- Aloha Fonts (each) ... 15
- Amiga SciFi ... 52
- AmiZoo ... 34
- Architectural Design ... 24
- Ashas Fonts ... 64
- Bird Pics ... 25
- China Pics ... 27
- Clip Art Disks 1-8 (each) ... 15
- Desktop Artist ... 23
- E-Clips ... 74
- New! For Art's Sake ... 16
- Future Design ... 24
- GEN Animations ... 37
- Heraldic Pics ... 27
- Human Design ... 24
- Kara Anim Fonts 1 ... 32
- Kara Anim Fonts 2 ... 32
- Kara Headlines 1 or 2 ... 53
- Lion's Calligrafonts ... 64
- Lon's Fonts ... 24
- Maps Pics ... 44
- Masterpiece Fonts ... 149
- Media Line Fonts ... 26
- Microbot Design ... 24
- PixelScript Fonts 1 ... 54
- PixelScript Fonts 2, 3 or 4 ... 47
- PixelScript Ornaments ... 47
- PixelScript Sampler ... 47
- Pro Font Library ... 54
- New! Pro Page Outline Fonts ... 129
- New! Quick Art ... 27
- New! Sex Fonts ... 26
- Starships 2050 ... 30
- Studio Fonts ... 32
- Subheads ... 55
- New! SuperClips ... 22
- Tate Fonts ... 48
- Vermont Seasons ... 29
- World Symbol Library ... 34
- Zuma Fonts ... 25

BUSINESS

- Advantage ... 129
- Budgeteer ... 34
- Critic's Choice ... 178
- Desktop Budget ... 48
- Easy Ledger ... 199
- Investor's Advantage ... 79
- Money Mentor ... Call
- Nimbus 1.3 (New Version) ... 99
- PHASAR 4.0 ... 61
- Project Master ... 130
- Publisher's Choice ... 139
- Securities Analyst ... 56
- Service Industry Accounting ... 274
- Take Stock ... 34
- Tax Break (1989) ... 57
- The Accountant ... 189
- The Works! Platinum ... 199
- New! Top Form II ... 62
- WordPerfect Library ... 93

WORD PROCESSING AND DTP

- City Desk 2.0 ... 134
- CygnusEd ... 67
- Excellence! (Req. 1MB) ... 159
- Kind Words 2.0 ... 74
- Micro Text ... 25
- Page Setter II ... 79
- PageStream ... 129
- PageStream Fonts (each) ... 27
- New! PageStream Fonts (Mag. Images) ... 28
- PageStream Forms ... 28
- Pen Pal ... 99
- Pro Templates ... 38
- Professional Page 1.3 ... 214
- ProFonts (each) ... 26
- Promise ... 39
- ProScript ... 33
- ProText ... 139
- ProWrite ... 75
- Reason ... 279
- Scribble! Platinum ... 99
- Transcript ... 47
- WordPerfect (Updated!) ... 179

COMMUNICATION

- A-Talk III (New Version) ... 70
- Baud Bandit ... 35
- BBS-PC ... 106
- Online! Platinum ... 66
- Skyline ... 99
- Tele Tutor ... 21

GAMES

- 3D Pool ... 27
- 4th & Inches ... 30
- 688 Attack Sub ... 36
- AB Zoo ... 28
- Action Fighter ... 28
- New! After The War ... 36
- New! Afterburner ... 33
- Airball ... 28
- Airborne Ranger ... 36
- Alien Legion ... 36
- Alien Syndrome ... 28
- New! All Dogs Go To Heaven ... 36
- Altered Beast ... 34
- Alternate Reality ... 29
- Amiga Karate ... 24
- Andromeda Mission ... 28
- Annals of Rome ... 27
- APB ... 31
- Aquanaut ... 31
- Aquaventure ... 29
- Archipelagos ... 29
- Arena ... 15
- Art Of Chess ... 24
- Art of Go ... 42
- Asterix ... 36
- Astrarath ... 36
- Aunt Arctic Adventure ... 27
- Auto Duel ... 28
- Baal ... 20
- New! Bad Company ... 36
- Bad Dudes ... 31
- Balance of Power 1990 ... 31
- Balance of Power ... 31
- Ballistix ... 22
- Barbarian II ... 29
- Barbarian ... 27
- Bard's Tale II ... 43
- New! Barney Bear ... 28
- New! Batman the Movie ... 31
- Batman ... 34
- Battle Chess ... 34
- Battle of Britian ... 46
- Battle of Midway ... 29
- Battle Squadron ... 29
- Battle Tech ... 34
- Battlehawks 1942 ... 36
- Battleship ... 20
- Beam ... 23
- New! Bermuda Project ... 31
- Better Dead Than Alien ... 23
- New! Beyond Dark Castle ... 41
- Bionic Commando ... 28
- Black Cauldron ... 29
- Black Jack Academy ... 29
- Black Magic ... 27
- Black Shadow ... 25
- New! Black Tiger ... 36
- Blitzkrieg/Ardennes ... 42
- Blood Money ... 28
- New! Blood Wych Data Disk ... 18
- Blood Wych ... 36
- New! Blue Angel 69 ... 28
- New! Blue Angels ... 36
- Bobo ... 24
- New! Boing the Game ... 31
- Bomb Busters ... 23
- Bombuzal ... 29
- Breach 2 ... 34
- Breach Scenario ... 19
- Breach ... 29
- Bride of the Robot ... 31
- Bridge 5.0 ... 27
- Bubble Ghost ... 29
- New! Budokan ... 32
- Buffalo Bill ... 36
- California Games ... 29
- Capone ... 28
- Captain Blood ... 38
- Captain Fizz ... 21
- Carrier Command ... 33
- Casino Fever ... 26
- Centerfold Squares ... 24
- New! Champions of Krynn ... 37
- New! Chariots of Wrath ... 27
- Charon 5 ... 24
- Chessmaster 2000 ... 30
- Chrono Quest ... 34
- Circus Attractions ... 29
- New! Clown-O-Mania ... 28
- Colossus Chess ... 27
- Combat Course ... 27
- Conflict Europe ... 36
- Corruption ... 31
- Cosmic Bouncer ... 21
- Cosmic Pirate ... 37
- Cosmic Relief ... 27
- New! Courtroom ... 36
- Craps Academy ... 26
- Crash Garrett ... 27
- Crazy Cars ... 27
- New! Crossbow: William Tell ... 31
- Crossword Creator ... 35
- Crystal Quest ... 36
- Cyber Complex ... 25
- New! Cycles ... 29
- D.R.A.G.O.N Force ... 36
- Daily Dbl. Horse Racing ... 24
- Danger Freak ... 24
- Dark Castle ... 35
- DataStorm ... 27
- New! Day of the Viper ... 36
- Deathbringer ... 29
- Deep Space ... 21
- Deja Vu II ... 33
- Denaris ... 28
- Detonator ... 28
- Devonaire ... 34
- Distant Armies ... 31
- Dive Bomber ... 37
- Dominator ... 29
- Dominoes ... 18
- New! Double Dragon II ... 31
- Dr. Doom's Revenge ... 31
- Dragon Force ... 35
- Dragon Spirit ... 31
- New! Dragon's Lair II ... 47
- Dragon's Lair ... 38
- Dragons of Flame ... 31
- Dragonscape ... 31
- New! Drakkhen ... 41
- Dream Zone ... 31
- Dungeon Master Asst. ... 24
- New! Dungeon Master Editor ... 24
- Dungeon Master Hint Disk ... 15
- Dungeon Master ... 29
- Dungeon Quest ... 34
- Earl W. Commisioner's Disk ... 15
- Earl Weaver 88 Stats ... 15
- New! Earl Weaver 89 Stats ... 15
- Earl Weaver Baseball ... 35
- Eliminator ... 28
- New! Emperor of the Mines ... 37
- Empire ... 36
- New! Enunciator ... 17
- New! Eskimo Games ... 28
- European Scenery ... 20
- Evil Garden ... 16
- Exolon ... 28
- Eye of Horus ... 29
- F/16 Combat Pilot ... 36
- F40 Pursuit ... 31
- Faery Tale ... 29
- Falcon Scenery ... 20
- Falcon ... 34
- Famous Course Disk ... 17
- Fast Break ... 30
- New! Femme Fatale Data ... 17
- Femme Fatale ... 28
- Fernandez Must Die ... 29
- Ferrari Formula 1 ... 36
- Feud ... 18
- Fiendish Freddy ... 35
- Fighter Bomber ... 44
- Final Mission ... 25
- Fire & Forget ... 27
- Fire Brigade ... 33
- First Person Pinball ... 36
- Fish ... 31
- Flight Simulator 2 ... 32
- New! Fool's Errand ... 37
- Forgotten Worlds ... 29
- Formula One ... 21
- Four In One ... 22
- Fright Night ... 28
- Frost Byte ... 21
- Galactic Invasion ... 19
- Ganymed ... 22
- Garfield's Winter Tale ... 36
- Garfield ... 36
- GeeBee Air Rally ... 28
- Gemini Wing ... 29
- Genius ... 29
- Gettysburg ... 42
- Ghouls & Ghosts ... 29
- Global Commander ... 27
- Grand Prix Circuit ... 30
- Grand Prix Master ... 34
- Gridiron ... 30
- Guerrilla War ... 31
- Gunship ... 37
- Harrier Combat ... 35
- New! HellRaiser ... 35
- Heroes of the Lance ... 29
- High Steel ... 28
- Hillsfar ... 36
- Hole In One Courses ... 15
- Hole In One ... 25
- Hollywood Poker ... 25
- Holmes ... 37
- Hometown USA ... 29
- HoneyMooners ... 29
- Hostage ... 30
- New! Hound of Shadow ... 31
- New! Hoyles Book of Games ... 28
- Human Killing Machine ... 28
- Hunt For Red October ... 36
- Hybris ... 26
- New! Hyperforce ... 35
- I Ludicrous ... 25
- New! Imperium ... 32
- Indiana Jones (Doom) ... 28
- Indy Jones: Adventure ... 36
- Indy Jones: Arcade ... 29
- New! Infestation ... 29
- Insanity Fight ... 29
- Interceptor ... 35
- International Soccer ... 28
- Iron Lord ... 35
- New! Iron Trackers ... 31
- It Came From The Desert ... 35
- New! J Nicklaus Couse Disk 2 ... 18
- J Nicklaus Golf ... 37
- Japan Scenery ... 20
- Jaws ... 29
- Jetsons ... 29
- Jet ... 35
- New! Jigsaw Puzzlemania ... 25
- Jinks ... 21
- Joan of Arc ... 31
- Joker Poker ... 33
- Journey ... 34
- Jug ... 27
- Kampfgruppe ... 46
- Karate Kid II ... 28
- Keef the Thief ... 36
- Kennedy Approach ... 30
- King Arthur ... 37
- Kingdoms of England ... 32
- Knight Force ... 31
- Kristal ... 35
- Lancaster ... 31
- Lancelot ... 29
- Las Vegas ... 19
- New! Laser Squad ... 31
- Last Duel ... 28
- Last Inca ... 28
- Leathernecks ... 29
- LED Storm ... 29
- Legend of Djel ... 36
- Legend ... 29
- Leisure Suit Larry II ... 34
- New! Leisure Suit Larry III ... 44
- Licence to Kill ... 29
- Lombard Rally ... 29
- Lords of the Rising Sun ... 33
- Lost Dutchman Mine ... 35
- New! Magic Candle ... 39
- Magic Johnson Hoops (1MB) ... 28
- Major Motion ... 27
- New! Maniac Mansion ... 34
- Marble Madness ... 19
- Mean 18 ... 27
- Menace ... 24
- Metropolis ... 31
- New! MicroLeague Wrestling ... 29
- Might & Magik II ... 46
- Millenium 2.2 ... 37
- Mind Roll ... 22
- Mission ConBat ... 35
- Moebius ... 38
- Momentum Check ... 25
- New! MTB: Barbarossa ... 46
- New! MTB: Central Germany ... 46
- New! New York Warriors ... 35
- New! New Zealand Story ... 36
- Night Hunter ... 29
- NightDawn ... 25
- Ninja Mission ... 18
- North & South ... 34
- Nuclear War ... 36
- Obliterator ... 30
- Off Shore Warrior ... 29
- Omega ... 36
- Omni Play Basketball ... 37
- Omni Play Horseracing ... 36
- Operation Clean Streets ... 28
- Operation Wolf ... 28
- Oswald ... 28
- Out Run ... 34
- P.O.W. ... 28
- New! P47 Thunderbolt ... 35
- PacLand ... 29
- Paladin Scenario ... 19
- Paladin ... 29
- New! Paperboy ... 36
- Paranoia Complex ... 32
- New! Persian Gulf Inferno ... 29
- Personal Nightmare ... 29
- Phantasm ... 24
- Phaser Gun ... 45
- Phobia ... 37
- Pictionary ... 36
- Pioneer Plague ... 27
- Pipe Dream ... 31
- Planet of Lust ... 29
- Platoon ... 31
- Pocket Rockets ... 29
- Poco Man ... 31
- Poker Solitaire ... 24
- Pool of Radiance ... Call
- Populous Worlds Disk ... 21
- Populous ... 33
- Postman Pat ... 29
- Power Sticks ... 24
- Power Struggle ... 29
- PowerDrome ... 29
- Prison ... 28
- Pro Football Simulator ... 27
- Pro Tennis Tour ... 31
- Project Neptune ... 27
- New! Puffy's Saga ... 29
- New! Pursuit to Earth ... 29
- Puzzle Storybook ... 29
- Qix ... 27
- New! Quartz ... 36
- Quest For Time Birds ... 36
- Questron II ... 35
- New! Raider ... 24
- Rambo III ... 27
- Rampage ... 27
- Reach For The Stars ... 33
- Realm of the Trolls ... 37
- Realm of the Warlock ... 25
- Red Heat ... 39
- Reel Fish'n ... 32
- Renegade ... 28
- New! Rennaisance ... 27
- Return To Atlantis ... 19
- Revenge of Defender ... 27
- Rhyming Notebook ... 31
- Rick Dangerous ... 37
- Ringside ... 29
- Road Raider ... 27
- Robo-Cop ... 36
- Rock Challenge ... 27
- Rocket Ranger ... 33
- Rockford ... 26
- Roger Rabbit ... 31
- Roll Out ... 27
- New! Roller Coaster Rumble ... 30
- Romance of 3 Kingdoms ... 46
- Romantic Encounters ... 29
- RVF Honda ... 31
- Santa Paravia ... 22
- Scary Mutants ... 27
- Scenery Disk 7 or 11 ... 18
- Scenery Disk 9 ... 20
- Seconds Out Boxing ... 21
- Sex Vixens From Space ... 29
- Shadow of the Beast ... 34
- Shadowgate ... 33
- Shinobi ... 33
- Shufflepuck Cafe ... 29
- Side Arms ... 29
- Side Show ... 31
- Sidewinder ... 21
- Silent Service ... 24
- Silicon Dreams ... 25
- Sim City Terrain Editor ... 17
- SimCity ... 31
- Skate Wars ... 34
- Sky Chase ... 28
- Sky Fighter ... 19
- Skyfox II ... 19
- Slaygon ... 29
- SlipStream ... 17
- Snake Pit ... 24
- New! Soccer Match ... 27
- New! Soldier 2000 ... 36
- New! Soldier of Light ... 36
- Solitaire Royale ... 22
- Sorcerer Lord ... 28
- Space Ace ... 39
- Space Cutter ... 20
- Space Harrier 2 ... 36
- Space Harrier ... 36
- Space Racer ... 21
- Space Ranger ... 18
- Space School Simulator ... 24
- Space Station ... 16
- Speedball ... 29
- Spherical ... 29
- Spin World ... 25
- Spitting Image ... 29
- New! Spy vs. Spy 2 ... 18
- Star Goose ... 29
- Star Ray ... 31
- Star Wars Trilogy ... 35
- StarFlight ... 36
- Steigar ... 31
- Stellar Crusade ... 41
- Stock Market Game ... 19
- Story So Far ... 29
- Street Fighter ... 29
- Strider ... 29
- Strip Poker Data (each) ... 15
- Strip Poker II ... 28
- New! Stryx ... 23
- Stunt Car Racer ... 34
- Sub Battle ... 34
- Super Scramble ... 29
- New! Sword of Aragon ... 32
- Sword of Sodan ... 34
- Swords of Twilight ... 36
- Synapse ... 24
- T.A.C.L. ... 74
- New! Table Tennis ... 28
- Tale Spin ... 37
- Tanglewood ... 27
- Tank Attack ... 22
- Targhan ... 36
- Targis ... 27
- Techno Cops ... 34
- New! Teenage Mutant Ninja Turtles ... 31
- Tele Epic ... 27
- Telegames ... 26
- Telewar II ... 27
- Telewar ... 29
- Terrorpods ... 28
- Test Drive II Data (each) ... 15
- Test Drive II Muscle Cars ... 15
- Test Drive II ... 30
- Tetra Quest ... 27
- Tetris ... 25
- New! Third Courier ... 36
- Three Stooges ... 31
- Thud Ridge ... 34
- Thunder Boy ... 26
- Time & Magik ... 31
- New! Tin Tin on the Moon ... 36
- Titan ... 31
- New! Tom & Jerry 2 ... 28
- Tom & Jerry ... 23
- Transputer ... 24
- Triad ... 36
- Triple X ... 29
- Trivia Pursuit ... 29
- New! Turbo Outrun ... 36
- Turbo ... 17
- TV Sports Basketball ... 36
- TV Sports Football ... 36
- Twilight Zone ... 29
- New! Typhoon Thompson ... 28
- Ultima III ... 29
- Ultima IV ... 39
- Under Sea Commando ... 34
- Uninvited ... 31
- Universe III ... 35
- Vampire's Empire ... 17
- Vegas Gambler ... 30
- Vette ... Call
- Vigilante ... 29
- Virus ... 21
- Vortex ... 29
- Vulcan ... 29
- War In Middle Earth ... 35
- Warlock ... 28
- New! Waterloo ... 45
- Wayne Gretzky Hockey ... 34
- Where Sleeping Gods Lie ... 36
- White Death ... 39
- Willow ... 28
- WindWalker ... 31
- Wordplex ... 25
- New! World Championship Boxing ... 31
- World Class Course Disk ... 15
- World Class Leader Brd ... 29
- World of Flight ... 109
- World Snooker Billiards ... 22
- World Trophy Soccer ... 28
- Xenon II ... 39
- Xenophobe ... 36
- Zak McKracken ... 36
- Zany Golf ... 19
- Zero Gravity ... 21
- Zoom ... 20
- Zork Zero (w/Graphics) ... 40

EDUCATION

- Adv. of Sinbad ... 35
- Aesop's Fable (Unicorn) ... 33
- Aesop's Fable (Hilton) ... 19
- All About America ... 42
- Animal Kingdom ... 35
- Arabian Nights ... 35
- At The Zoo ... 31
- Cardiac Arrest ... 49
- Chicken Little ... 19
- New! CLAS ... 99
- ConSoundTration ... 30
- Deluxe Help ... Call
- Designasaurus ... 34
- Dinosaur Discovery Kit ... 29
- Dinosaurs Are Forever ... 29
- Discovery Data Disks ... 15
- Discovery Math ... 25
- Discovery Spell ... 25
- Distant Suns ... 51
- First Letters and Words ... 29
- First Shapes ... 29
- Fraction Action ... 33
- Grade Manager ... 69
- Intellitype ... 19
- Jigsaw ... 29
- Kinderama ... 33
- Learning Curve ... 55
- Linkword Languages ... 24
- Little Red Hen ... 19
- Logic Master ... 36
- Magical Myths ... 36
- Match It ... 29
- Math Talk ... 29
- Math Talk Fractions ... 29
- Math Wizard ... 35
- Mathamation ... 59
- Mavis Beacon ... 33
- Nutri Fax ... 43
- Opposites Attract ... 31
- Planetarium ... 51
- Read & Rhyme ... 33
- Read-A-Rama ... 33
- Recipe Fax ... 28
- Speller Bee ... 29
- New! Talking Storybook (each) ... 24
- Three Bears ... 22
- Three Little Pigs ... 19
- Trip (w/Atlas) ... 35
- Ugly Duckling ... 22
- New! Where in Europe ... 35
- Where In The USA ... 35
- Where In The World ... 30
- Word Master ... 35

DATABASE

- New! DB Man V ... 199
- DataRetrieve ... 59
- DataRetrieve Prof. ... 189
- Mailodex ... 35
- Micro Base ... 25
- Microfiche Filer Plus ... 115
- Nag Plus ... 54
- Superbase Personal II ... 99
- Superbase Prof. 3 ... 229
- Who What Where When ... 67

PROGRAMMING

- A/C Basic (v1.3) ... 134
- A/C Fortran ... 199
- Addison Wesley Manuals ... Call
- Amiga Machine Lang ... 24
- ARexx ... 36
- AssemPro ... 72
- Aztec C-Dev ... 199
- Benchmark C Library ... 71
- Benchmark IFF Library ... 71
- Benchmark Modula-2 ... 134
- Benchmark Simplified ... 71
- C++ ... 279
- C 5.0 ... 199
- CAPE 68K ... 65
- Developer's Toolkit ... 39
- DevPac Amiga ... 67
- DSM Disassembler ... 44
- Extend ... 29
- HiSoft Basic ... 115
- InovaTools (New Version) ... 57
- J-Forth (New Version) ... 145
- L Debug ... 76
- Lint ... 85
- Magellan (New Version) ... 129
- Modula 2 ... 179
- Module 2 Debugger ... 88
- Power Windows 2.5 ... 63
- Shell ... 45
- Software From Hell ... 56
- Source Level Debugger ... 82
- ToolKit ... 35
- TxEd Plus ... 57
- Ultra Card ... 37
- W-Shell ... 36

MUSIC

- AMAS ... 135
- Amiga Sings ... 12
- Audio Master 2.0 ... 63
- Bars & Pipes ... 199
- New! Bars & Pipes Music Box ... 45
- New! Bars & Pipes Internals Sound Kit ... 45
- Deluxe Music ... 63
- Dr T. Patch Editors ... Call
- Drum Studio ... 35
- Dynamic Drums ... 59
- Dynamic Studio ... 144
- Fat Sounds ... 46
- New! Fun Keys ... 28
- KCS ... 177
- KCS Level II ... 239
- M ... 149
- New! MasterSound ... 54
- Master Tracks Pro ... 259
- MIDI Recording Studio ... 49
- MidiMagic ... 98
- New! Music Modules Starter ... 36
- Music Mouse ... 49
- Music X ... 165
- Pattern Splatter ... 43
- Pro Sound Designer ... 109
- Quasar Sound ... 37
- Sonix ... 49
- Sound Lab Amiga ... 239
- Sound Oasis ... 72
- Sound Trax 1 or 2 ... 15
- Soundquest Patch Editors ... 100
- Studio Magic ... 75
- Synthia ... 75
- Synthia Professional ... 280
- Texture ... 102
- The Copyist Pro ... 149

UTILITIES

- AMAX ... 129
- Ami. Alignment ... 37
- Amiga DOS Toolbox ... 40
- Amiga Tricks & Tips ... 17
- AmiKit ... 29
- BAD ... 34
- New! Can Do! ... 99
- CLImate ... 25
- Color Commander ... 21
- Cross DOS ... 25
- Des Cartes ... 24
- Disk 2 Disk (New Version) ... 37
- Disk Mechanic ... 60
- DiskMaster ... 40
- Dos 2 Dos ... 37
- Doug's Library Disk ... 11
- Doug's Math Aquarium ... 59
- New! D.U.D.E. ... 35
- Dunlap Utilities ... 55
- Express Copy ... 31
- EZ Backup ... 36
- FACC II ... 25
- Family Tree ... 34
- Home Inv Manager ... 27
- Mac To Dos ... 92
- Mastering CLI ... 29
- MicroLawyer ... 42
- MultiPrefs ... 23
- Norgen Geneology ... 71
- Palette Printer ... 25
- PixelScript ... 104
- Project D (New Version) ... 37
- Quarterback ... 47
- Raw Copy (Latest!) ... 37
- Stuffit ... 28
- SuperBack ... 54
- T Shell ... 34
- Tarot Master ... 21
- Thinker ... 49
- New! Total Control Diet ... 74
- Ultimate Dos Utils ... 46
- Virus Infection Protection ... 32
- Virus Protection Toolkit ... 39
- Vo Rec One ... 129
- WB Extras ... 25
- X-Copy II ... 28

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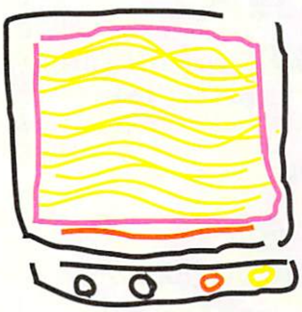
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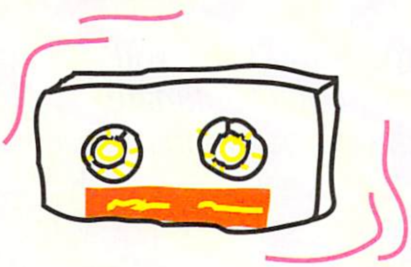
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A-SQUARED
- Live — A1000 ... $259
- Live — A500 ... 345
- Live — A2000 ... Call
- *Call for product availability*

ANAKIN
- Easyl — A1000 ... 369
- Easyl — A500 ... 359
- Easyl — A2000 ... 399

APPLIED VISIONS
- FutureSound (A1000) ... 144
- *New!* FutureSound A500/2000 ... 95

ASDG
- *New!* JX-100 Scanner w/ SW ... 899
- Multi Port Serial Card ... Call
- *New!* Scanlab ... Call

CALIFORNIA ACCESS
- CA-880 3.5" Drive ... 127

CITIZEN
- *New!* 24-Pin Color Printer ... Call

DIGITAL CREATIONS
- SuperGen ... 644
- ☞ SuperGen SC ... Call
- *New!* SuperGen 2000S ... Call
- *New products coming soon!*

ECE
- MIDI for A500/A1000/A2000 ... 58

EXPANSION SYSTEMS
- *New!* BaseBoard 0K ... 134
- *New!* BaseBoard 512K ... 214
- *New!* BaseBoard 4MB ... 534
- Tool Box ... *In Stock!*
- *New!* A500 Power Supply ... 94

GO AMIGO!
- Disk Head Cleaner ... 15
- 30 Disk Case ... 10
- ImageWriter II Cable ... Call
- Printer Cable ... 20
- Modem Cable ... 20
- Mouse Pad ... 10
- Sony Cables ... Call
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- Trackball ... 39

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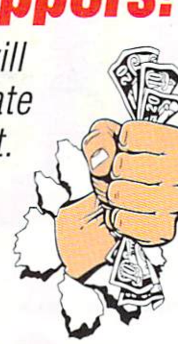
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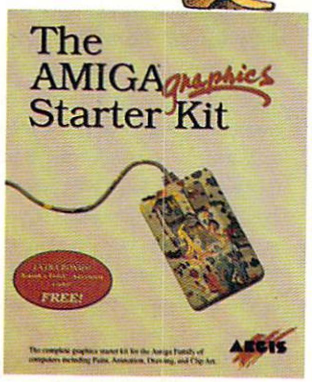
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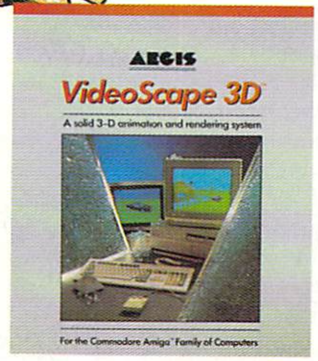
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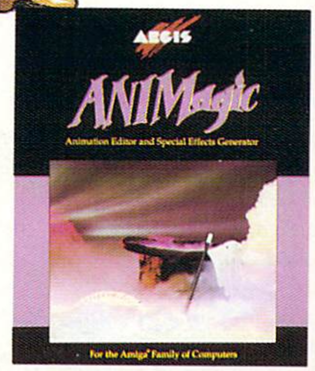
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from p. 62

being shot during the enemy's turn. The game also introduces a new type of offensive system: The enemy must be within the viewing field of at least one of your warriors for you to see him. If your enemy has enough points left over from his previous turn, he may be allowed "opportunity fire," letting him shoot at you immediately, even though it's your turn. Moral: Keep the enemy in your field of view.

For atmosphere, Laser Squad boasts outrageous music and graphics. All the details, from the bathroom showers to the computer consoles, make the scene look realistic. Because the combat areas are large, you have to use the joystick to scroll over all the sections. Scrolling is smooth, however, and you can alter its speed.

The game's drawbacks are hardly worth mentioning: A separate disk is required to save a game in progress, outfitting men with weapons can be time-consuming, and upon completion of a mission, you are told only the final scores and who the victor is. Aside from that, there's not much to complain about. I became addicted to it after an hour, and the hunger for revenge kept me playing even after defeat. *($39.95, MicroIllusions, 17408 Chatsworth St., Granada Hills, CA 91344, 818/360-3715, 800/522-2041. No special requirements.)*

GOLD OF THE AMERICAS

By Peter Olafson

STRATEGIC STUDIES Group (SSG), the Australians who gave us Reach for the Stars, has reached back 500 years and pulled out a charming and ultra-playable game of colonial conquest called Gold of America.

As the four great powers of the 16th century, you and three other human or computer players try to colonize North and South America. Representing either Spain, Portugal, England, or France, you buy armies, colonists, and slaves, plus trade, war, and pirate ships, and assign them to territories in the Americas. Your king kicks in some of his fortune to help fund this conquest, but claims a huge share of the proceeds. At the end of 30 ten-year turns, the player with the highest total of colony points wins. Be warned: The computer opponents are pleasantly aggressive.

The icon-driven, mouse-controlled interface makes the game go like lightning. Want to raid your neighbor? Just click on the territory and drag over an explorer icon and as many armies as you need. The screens are so cleanly designed that you can start playing without reading through the documentation. If you get into a tight spot, using the save-game option is a good safety precaution.

While simplicity itself to play, the game is deceptively complex: You can choose random or historical settings for the New World and Europe, and three levels of computer play. History buffs, however, may want more in-game options. Although the explorers are drawn from life, you can't give them any instructions beyond their destination. An option to govern the explorers' caution or recklessness would be nice, but I like this game as it is. You can even play the solo version in one sitting—a rare virtue for a strategic game.

The graphics are more EGA card than Agnus, but they effectively represent what they're supposed to stand for. Some are actually delightful, such as the increasingly sophisticated buildings that represent a colony's level of development.

Explore this one; you won't be sorry. Gold of the Americas reaches for the New World... but makes it to the stars. *($39.95, Strategic Studies Group, 1747 Orleans Ct., Walnut Creek, CA 94598, 415/932-3019. No special requirements.)*

WEIRD DREAMS

By Dolan Yaple

SOME COMPUTER GAMES drive people nuts, but in Weird Dreams you really are crazy! Evil forces have attacked your subconscious, causing you to hallucinate, dissociate, and buy Motley Crue albums. Awful apparitions such as carnivorous flowers, hungry fried chickens, and giant hopping reproductive organs stalk your dreams. A ►

Nazis will return until they succeed. There is at least one correct line, natch. Resist the temptation to flirt or be flip. Be as factual as you can, given the choices, and don't be afraid to own up to the improbabilities of the situation.

For those of you who are earthbound by uncertain mastery of the arcade games, there's one distinctly non-heroic way to get to the moon: stay in New Jersey.

• More Rocket Ranger help comes from Jonathan Vitti of New Canaan, CT. He suggests assigning agents to infiltrate countries around the Mediterranean first, then Africa and South America. In each case leave a resistance movement behind. (Hit the unoccupied territories first.) Jonathan writes that you'll need to make one trip a year to snag a rocket part (and avoid arrest as a terminal coward) and perhaps take a further trip to a lunarium base.

• Don't just go out and do the town in *It Came From the Desert* (Cinemaware, $49.95); as in Rocket Ranger, you'll only waste time. The game does point you in the right directions in very subtle and acceptable ways.

Of course, you'll still have to deal with the doting ants who want a kick in a particular part of the head and those highway jerks who want to play chicken. (Be aggressive.) If your aim is off and you land in the hospital, the security heavies who stand guard at the front door can be lured away from their post. (Hide in a room until they pass.) Of course, sometimes it doesn't work.

If you need help with a game, think you could help someone else, or just want to bellow irrationally, drop me a line in care of *AmigaWorld* (80 Elm St., Peterborough, NH 03458) or by E-Mail (P. Olafson on GEnie, Peteroo on PLink).

COMPANIES MENTIONED:

Cinemaware, distributed by Electronic Arts, 1820 Gateway Dr., San Mateo, CA 94404, 415/571-7171, 800/245-4525.

Strategic Simulations Inc., distributed by Electronic Arts. □

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false step and your head blows up like a cheap balloon and your eyeballs pop out like squashed frogs on the road.

Play is difficult, and depends heavily on timing; you must provide the required joystick input at just the right moment, or it's lights out. (If you get impatient, there's a hint book to reveal the necessary maneuvers.) Unfortunately, because the animation is slow and joystick response sluggish, reliance on quick reflexes is counterproductive. This gives the game a frustrating and arbitrary quality that will exasperate those who do not enjoy its archetypal imagery and poodle-in-the-microwave humor.

Weird Dreams looks good, largely because of the clever (some would say demented) sensibilities elevating its otherwise cartoonish graphics. Its Music and sound are better than average. The program is mostly memory-resident, so there is little loading delay during play, but because of the DOS-based copy-protection, the included hard disk installation script does not work. You must also contend with a keyword protection scheme that sometimes asks for hyphenated, misspelled, or even nonexistent words.



Death be not proud—or pretty.

Inevitably, some people will loathe this product: The lawn mower that sprays body parts as it noisily liquifies its victims will appall them and the toothy soccer ball that chews up little girls (then burps) will horrify them. In a world with room for computer strip poker, however, Weird Dreams deserves to find an audience. Who knows—it might even be the game of your dreams. *($39.95, Medalist International, 180 Lakefront Drive, Hunt Valley, MD 21030, 301/771-1151. Joystick required.)* ►

BLOCKOUT

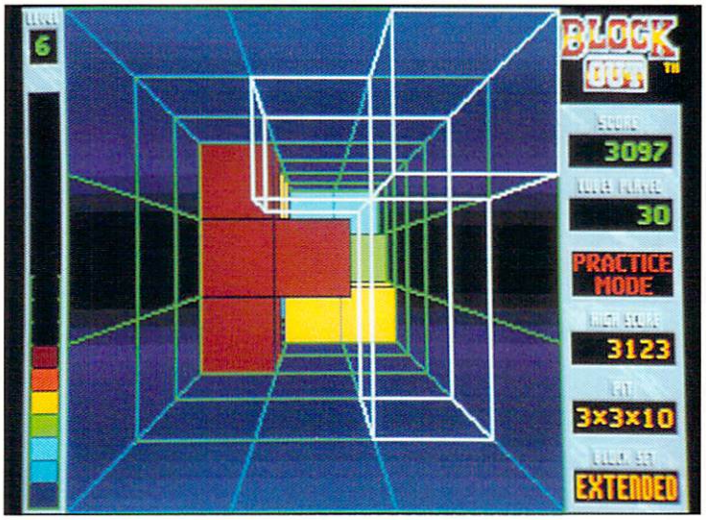
By Alana Korda

FOR YOU GAMESTERS who loved to play with blocks when you were kids, California Dreams has created Blockout—a 3-D mind-teaser that challenges your coordination and your quick thinking. Although easy to learn, Blockout is difficult to master—but, once you start playing, you'll be hooked for hours.

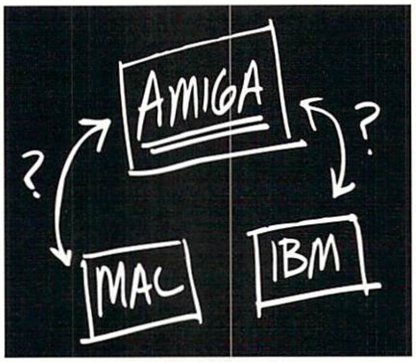
The premise of the game is simple—a series of multi-shaped boxes individually appear on the screen and you must position, rotate, and drop them into the three-dimensional pit. (It's lot like Tetris in 3-D.) When one level is full, it disappears and you continue to fill the next level. The trick is that you must work quickly because the blocks will fall where you do not want them; they might cover the spaces rather than fill them, causing the levels to pile up rather than to disappear. When the pit fills up, the game is over.

The pit is a three-dimensional hollow column with grids on its inside edges. Although the grids take a little getting used to, they help you to position your blocks. You rotate the falling blocks with three keys, but you have the choice of mouse or keyboard for positioning them in the pit. The mouse moves the blocks faster, but the keyboard is more accurate when you aim for the center spots.

After answering the copy-protection request, you can begin playing immediately or customize the game. You can change the pit's width, length, or depth, alter the rotation speed of the blocks, and choose the blocks from three sets: a 2-D flat set for beginners, a basic set of three 3-D blocks, and an extended set of 41 blocks. With such a variety, you may have a tough time shutting off your Amiga. Don't you wish blocks had been this fun when you were two? *($39.95, California Dreams, 780 Montague Expwy. #403, San Jose, CA 95131, 408/435-7355. No special requirements.)* ■



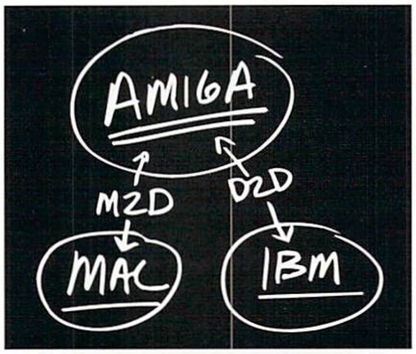
Be careful not to fill the pit in this 3-D jigsaw.



PROBLEM

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DOS-2-DOS uses your Amiga's floppy drives to read/write IBM/Atari 3.5-inch disks • Reads/writes 5.25-inch IBM disks (using an external 5.25-inch Amiga drive) • Converts ASCII text files both ways • Supports international character sets • Formats IBM/ Atari disks • Use with IBM program HIJAAK (from Inset Systems, not included) to capture/convert IBM graphic images to/from IFF.

***MAC-2-DOS** — when it absolutely, positively has to get to or from a Mac disk, immediately.*

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from p. 16

so jagged in comparison with the Compugraphic fonts, you will probably want to stick with the latter for all but your most informal publications.

FUTHER BACKUP

PageSetter II still provides reasonable integration of text and graphics; it can import Professional Draw (Gold Disk) and IFF-standard files, the latter printing in up to 16 shades of gray. The Compugraphic font technology is the most major change, but text support has also been beefed up. You can now import TextCraft (Commodore), Scribble! (MicroSystems Software), WordPerfect (WordPerfect), Transcript (Gold Disk), and generic ASCII files without loss of embedded styling such as bolding or underlining. Once imported, however, only rudimentary text controls are available for such files: While you can change text leading and inter-paragraph spacing, there are no inter-word or inter-letter spacing controls. Even things as basic as hyphenation are lacking. You *can* apply a default or specified fill pattern to bitmap fonts—although why you would want to do so escapes me.

While typographic refinements are not available, a robust environment is supplied. Text and graphics reside in boxes that you can move and resize. At the perimeter of the printable page area is the "art board," where you can place text and graphics until you need them. The whole thing is much like PageMaker for the Macintosh and hangs together nicely. It shouldn't take new users long to get up to speed on PageSetter II, although the documentation is not of much help in this regard.

While PageSetter II lacks the high-end features (such as color, PostScript support, layout templates and advanced typographic controls) of Professional Page, it is a solid package that is useful for creating publications of moderate complexity and length. It's also very reasonably priced. Combine these factors with Gold Disk's affordable upgrade to Professional Page ($150), and PageSetter II becomes both suitable for first-time publishers and a painless migration path to greater power for those who outgrow it.

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Times are a-changin': bitmapped Amiga characters make way for Compugraphic (CG) fonts.

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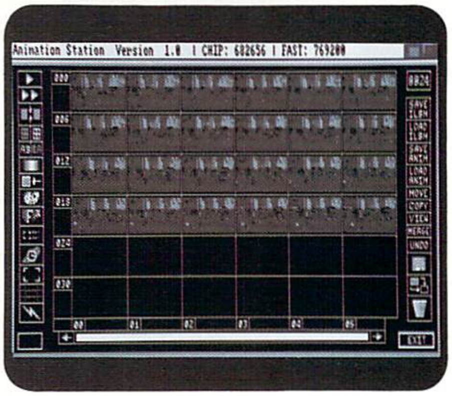
Your ticket for fine tuning

By Michael Hanish

SHORT OF DRAWING frames, there are not many things you can't accomplish with Animation Station, a multipurpose animation editor and utility.

The program opens onto the main editing screen, containing a large storyboard area and rows of icons and buttons on each side. There are no pull-down menus, and the title bar gives only a read-out of available chip and fast RAM and the standard front and back gadgets.

You can load individual numbered frames (IFF or HAM) into Animation Station and let the program compress them into an Anim file, or you can load an existing animation. Either way, the program will grind away for a while and then return to the main screen, showing a storyboard—a scrollable display of miniature numbered frames—for your animation. This is a wonderful way of displaying and giving access to the animation: You can view a single frame simply by double clicking on its representation, and can work with groups of frames in various ways. Unfortunately, when there are a lot of objects in each frame, or when the background is colored, the representations are useless for identification. On default, the program creates a storyboard file and updates it each time you make an editing move. This eats up both time and disk space, but, thankfully, you can turn this feature off when loading or at any point during editing.



All aboard the storyboard.

Once the animation is loaded (running the program requires 200K more fast RAM than the file size), sit back with your critic's pad. Click one of the buttons at the top-left column of icons to play it, either with specified timing information or just as fast as possible. There are no provisions for playing animations in reverse, for ping-ponging (alternating ►

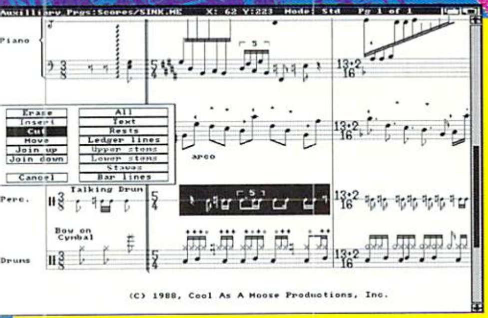
FULL SHRED

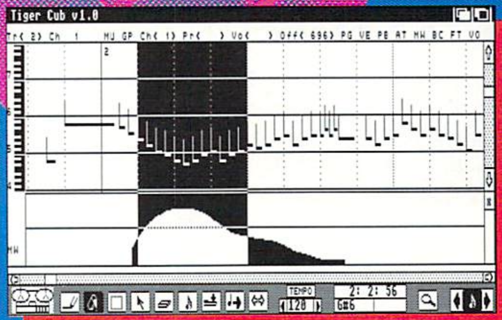
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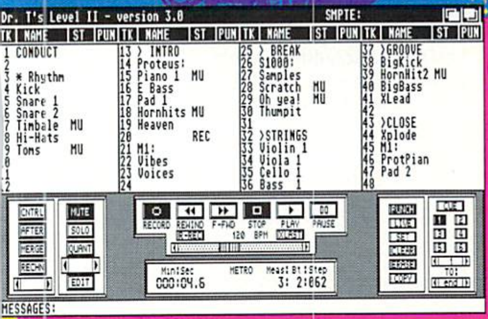
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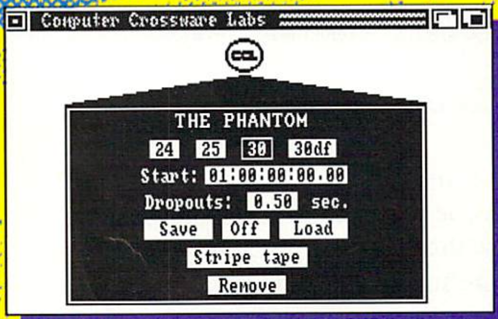
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Circle 35 on Reader Service card.

forward and backward), or for stepping through frame by frame. Once you know what changes you'd like to make, click the mouse again to stop playback and return to the Edit screen.

Change Accordingly

To use the Insert icon, you must first select a frame. Click on the left half of this icon, and the program inserts the requested number of blank frames after the selected one; click on the right half, and the frames are plugged in before the chosen one. The total frame count (in the upper right) is adjusted accordingly and the storyboard is updated.

Another icon accesses the Mirror function. Click on it after selecting a sequence of frames, and the program swaps the first frame in the sequence for the last, and so on. You can make a short animation ping-pong by duplicating the sequence, appending the copy to the original, initiating the mirror process to reverse the order of the second half, and then playing the whole thing.

The Pallette icon lets you edit the colors of either a single frame or an entire animation via a requester. Because Animation Station operates in all color modes, including HAM, this is a very useful feature. Color registers run along the bottom of the Palette requester, while red, green, and blue sliders line the top, and a bar graph in the middle displays the percentage each color is used in the current frame. Editing options include Copy, Spread, Swap, Restore, and Convert-to-Gray-Scale (16 level); these can be applied to a frame or range of frames, between or across several frames, or to the entire animation. The Spread function, for example, can change a shade of red in the first frame progressively until it appears blue in the final frame.

Another button brings up the Special Effects requester. From here you can flip any selected frames on the X or Y axes, or both, reduce frames to half or quarter size and then position them anywhere on the screen, or scroll the animation in or out in four directions. You can also apply four degrees of pixelization, motion blur moving objects (HAM animations only), and offset the animation within the screen by any amount along either axis. There are not vast numbers of effects, but in combination they can produce a wide variety of striking visuals. Also, while Animation Station does not provide extraordinary shatters, tumbles, or other ADO-like effects, its effects work solidly and are processed relatively quickly. ►



YOUR TURN!

Animation Station's storyboard format shows you your whole sequence at once, so you can easily keep track of where you are at all times. I like the option for adding frames. I would like to have more size options for shrinking the screen, however—maybe even to fit a given shape. I've also had a hard time lining up and adjusting brush movement.

—*Joseph W. Smith*
Trenton, NJ



Circle 250 on Reader Service card.

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Circle 181 on Reader Service card.

The Brush Movement requester lets you set a path for any smaller-than-full-screen image—either imported (unfortunately, the program does not recognize the animbrush format) or grabbed from the current animation. Just set starting and ending placements and steps along the path as key frames. The program then performs the merge in one of two modes: Quick, which ignores color information, or Smart, which attempts to optimize palette conflicts as it goes.

Both pictures and animations can be attached to each other or composited. If you have loaded one animation and choose to load another of the same resolution and number of bit planes, you are given the option of loading it before, after, behind, or in front of the current animation. Again, this is done in either the Quick or Smart modes.

Timing information and sound synchronization are combined into one requester. Animation timing is defined in jiffies ($^{1}/_{60}$ of a second), and can be applied to individual frames or the entire animation. Sounds (the program recognizes IFF-8SVX and Future Sound files) are defined as either foreground, which play once and stop, or background, which are continuous. You must assign a starting frame, volume setting, and channel to each sound, and when you save an animation, the program creates a file to contain this information. This audio-assignment file, as well as the sound files themselves, must be present for playback either with Animation Station or View, the included Anim player. (This approach comforms to the proposed OpCode6 animation standard not yet recognized by Commodore.)

OUTTA HERE

Animation Station includes several external utilities: View, the animation player that supports attached audio files; BuildAnim, to compile an animation from individual pictures; SplitAnim, which breaks a large animation into two playable files; CombineAnim, which does its work on disk instead of in RAM; and AnimInfo, which provides information ►



YOUR TURN!

Although Animation Station can accept multiple-frame DPaint animations all at once, it requires you to load in Sculpt animations one frame at a time. You can see your whole animation on one screen, and it is easy to delete frames. I like being able to copy and flip sequences. It took me just 20 minutes to learn the program!

—*Clifton Barnes*
Oakland, CA

on screen format, type, number of frames, and file size. While I appreciate these functions, I wish they were available from within the program. Strangely, while the main program relies on View for playback, View's single-step play and adjustable-speed features are not available when used from within Animation Station itself; trying to access them thus crashes the machine.

Animation Station has a very polished and solid feel, and performs smoothly and as promised. There are, however, a number of things I recommend the developer address. Among them are the inability to move through an animation one frame at a time to pinpoint changes, and the the storyboard's representation of colored backgrounds and crowded frames. Another problem is that when an overscanned animation plays from the editor, View shifts the whole image off center, making it difficult to get a feeling for placement and composition. Finally, I would like to see support for the animbrush standard.

Despite these few complaints, Animation Station is a worthwhile tool for anyone involved in animation. It provides a number of excellent features that are both nicely implemented and easy to work with.

Animation Station
Progressive Peripherals & Software
464 Kalamath St.
Denver CO 80204-5020
303/825-4144
$99.95
One megabyte required.

FrameGrabber 2.0

Now you can grab even more

By Louis R. Wallace

A SOFTWARE UPGRADE that enhances Progressive Peripherals' real-time color digitizer, FrameGrabber 2.0 offers a wealth of new features and improves on many original ones. To use it, you need not only the FrameGrabber hardware, but also one meg of RAM (more is recommended), a centronics-style printer cable, and a signal from some video source such as a TV, VCR, video camera, or laser-disc player. FrameGrabber works with standard 68000 Amigas, 68020 or 68030 accelerators, and with the ECS Agnus chip.

> **YOUR TURN!**
>
> I haven't used the 2.0 software a whole lot yet, but I think the OverSampling and AutoZone features really enhance FrameGrabber.
>
> —*Emily Tonkin*
> *Thomaston, CT*

FrameGrabber 2.0 can digitize an image in color (2, 4, 8, 16, 32, 64, or 4096 colors), black and white, or definable Pseudo Colors, all in real time, It supports a variety of screen resolutions (320 × 200, 384 × 240, 320 × 400, 640 × 200, and 640 × 400) and modes. You can enlarge or reduce images to any size. The software can automatically reduce a digitization to 1/4- or 1/16-screen size, so you can line up successive frames on the same screen for a storyboard effect.

Before and After

The author of the FrameGrabber 2.0 software also wrote Progressive's image-processing program, PIXmate. Not surprisingly, among FrameGrabber's many options is a large complement of image-processing functions, including both pre- and post-capture options. Prior to digitizing, for example, you can select Over Sampling, which digitizes an image any specified number of times up to 50. These multiple images are stored in memory and then combined into a composite. This option can give you far better results than a single capture, but it does take longer. Other pre-digitizing options are Multiple Exposure (which gives you two samples), Mirror Image, Weighted (which modifies the automatic ►

contrasting performed), and AutoZone (which improves image quality in the center at the expense of the border areas). These options can be combined in a variety of ways, with each combination producing different results.

Once you have captured an image, you can alter it using techniques like edge detection, image sharpening, image averaging, or even photographic negative. While you cannot combine these directly, you can perform them sequentially. An example would be to sharpen an image before using edge detection to give better defined outlines in the final picture.

Supplied with the FrameGrabber 2.0 software is a red, green, and blue color wheel (similar to NewTek's Digi-View wheel). Like DigiView, you can use FrameGrabber 2.0 as a slow-scan system with a black-and-white camera. Digitize a still subject through the three filters, and then combine the single-color images into a color composite.

You can save your images in a number of formats, including the standard IFF, a Brush format (for areas smaller than the full screen), Palette (for saving only color information), RAW (unprocessed eight-bit-per-pixel data), IFF24 (a 24-bit-per-pixel IFF), DV21 (Digi-View's 21-bit-per-pixel format) and LUT (which contains information for the pseudo color option). FrameGrabber also supports the ANIM format. The animation capture can be set to run as fast as possible or at timed intervals—perfect for creating time-lapsed photography effects. With this you can create complicated digitized animations, save them to disk, and then load them into almost any animation player for display.



A strip of the original screen (top), with edge-detection (center) and negative (bottom) processes applied.

YOUR TURN!

2.0 is easier to use than the original FrameGrabber software. It multitasks well and is extremely powerful. I like the animation capabilities—the fact that I can take a series of pictures from tape and animate them on screen.

—Matt Hauer
Valrico, FL

Feeling a Little Low

While FrameGrabber 2.0 is an excellent package, it has a couple of surprising limitations. While low-resolution overscan (384 × 240) is available, no other overscan options are. If you require overscan (as many video applications do), make sure you can get by with lo-res. I also found one bug: the program will not digitize in color in hi-res interlaced mode (640 × 400). No matter what, the image comes out black and white. When I reported this to Progressive, a representative told me the company is working on a solution. One option I would like to see included is an ARexx port. This would allow control of FrameGrabber from other applications.

FrameGrabber is an integral part of my Amiga system, and with the new software, it is an even more useful tool. I highly recommend 2.0 to every FrameGrabber owner.

FrameGrabber 2.0
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Continued on p. 88



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from p. 84

dBMAN V

Works like DBASE, man

By Loren Lovhaug

DESPITE THE EVANGELISTIC efforts of Amiga enthusiasts, MS-DOS-based microcomputers dominate the workplace. The business world has adopted text-based programs—including Ashton Tate's DBASE III+ database manager—as industry standards. How to reconcile this fact with the Amiga's superior interface and multitasking capabilities? With version 5.2 of dBMAN, VersaSoft brings us DBASE III+ compatibility along with some support of Amiga-specific features.

The dBMAN program is a very accurate imitation of the powerful programmable relational DBASE III+. Running them side by side, I found the two programs look and function almost identically, from data types supported to screen layout to the obscure keyboard sequences used for control.

Also like DBASE III+, dBMAN operates on three distinct levels. On the first level, you can control it via a menu-based shell, called Assist. Assist lets you set up files, search records, perform routine maintenance, and create reports without using commands or the programming environment. Alternately, you can control the program from a command line using sometimes-lengthy database commands. Lastly, you can combine these commands with other programming structures to form complete programs that in turn allow others to create sophisticated custom applications capable of automating virtually any manipulation process. Because of DBASE's popularity, literally thousands of programs are available for use under its programming environment, and with just a few exceptions or alterations, these programs run under dBMAN on the Amiga.



YOUR TURN!

I do like dBMAN V's report writer. The program does the job, but I'm going to switch to using DBASE on the IBM and run it from the Bridgeboard when I get one. dBMAN just doesn't have all the features I need. Fortunately, VersaSoft is good on the phone; the documentation is terrible.

—***David Court***
Plymouth, MN

KEEPING UP APPEARANCES

With all the effort VersaSoft has put into making dBMAN look and operate like DBASE III+, it is no surprise that it bears little resemblance to most Amiga applications. It makes little use of the mouse and lacks the file requestors (a primitive keyboard-operated file-selection mechanism is provided), dialogue boxes, icons, and gadgets we have come to expect. It also does not support IFF-image and -sound data as do other Amiga database packages.

Exceptions to dBMAN's strictly text-style interface are found in the Assist, report-creation, and online-help modules. Ironically, however, while you must use the mouse to select these modules' main options (no keyboard shortcuts are provided), the mouse is abandoned thereafter. Too bad. . .the mouse would be particularly useful in creating screen formats and reports, and for marking and selecting items and records. Another oddity is that front and back gadgets are provided for task switching when the pull-down menus are active, but when these menus are not present, or when you are outside these modules, the gadgets disappear.

Other concessions to the Amiga environment include multitasking and the naming of devices in the Amiga standard (DF0: and DH1:, for example) instead of the MS-DOS standard (such as A: and C:). In addition, dBMAN supports Amiga-style full and partial path designations as well as AmigaDOS's capacity for long file names. Lastly, one Amiga command is included as part of dBMAN's language: MMENU lets you add to your applications command lists that you can click on to select items. (There is no sup- ►

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port for adding pull-down menus.)

Under Development

In support of applications developers, dBMAN includes an Assist-module option for automatic program generation and a compiler called Greased Lightning. The Assist-module feature can generate a rudimentary database shell based on criteria you establish. This shell masks users from the complexities of the command environment, and like the Assist program, lets users perform basic functions from menus. Unlike the Assist program, however, these menus are not mouse-controlled, and the utility is linked to a specific database file. Also unlike Assist, you can modify and extend this shell using dBMAN's programming language; in fact, the generated code is heavily commented for this purpose.

The compiler lets you convert programs written in dBMAN into free-standing applications that can function outside the dBMAN program. (To legally distribute software created with Greased Lightning, you must register with VersaSoft and pay a $250 fee.)

I had no problem transferring databases and their indexes from DBASE III+ to dBMAN and vice versa, and from purely a performance standpoint, dBMAN functions well. I cannot give it a general recommendation, however. Other programmable relational database managers for the Amiga (such Precision's Superbase Professional and Abacus's Professional DataRetrieve) offer as much power as dBMAN plus easy-to-use Intuition-style environments. These products also handle IFF images, offer programming languages that support file requestors and dialog boxes, and, in the case of Superbase Pro, allow direct exchange of DBASE III+ files. I can, however, recommend dBMAN to those who need a database that operates like DBASE III+.

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Tracker's Quest

Unpolished apples for the teacher

By Randall R. Greenwald

"THERE'S STILL ROOM on the market for educational software that takes advantage of the Amiga's creative potential," I said to myself. "Maybe Tracker's Quest and the Discover series do." So, I set to work testing and evaluating. Although one of these programs shines in comparison with the others, all that glitters is not gold, and all that is computerized should not be sold.

Discouraging Discoveries

Discover Numbers and Discover US History & Geography are two entries in Maverick Software's lineup. Both present ►

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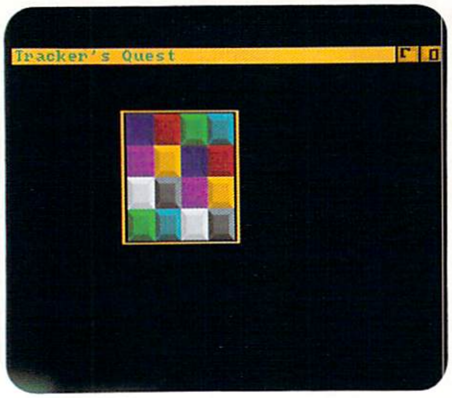
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Tracker's Quest: nitty griddy.

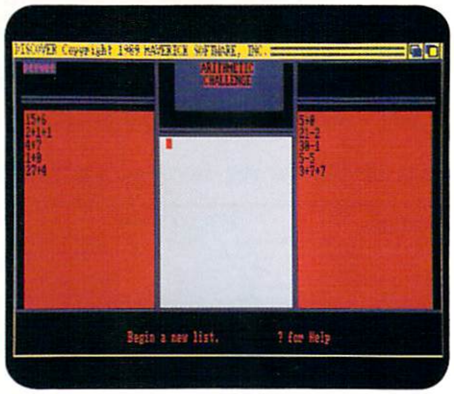
initial instruction screens with clashing colors, unindented paragraphs, and typographical mistakes. Making choices with single key strokes determines the content of your challenge, your opponent (computer or human), and whether or not you will be timed.

In Discover Numbers, you are given a list of math problems in a box. The object is to empty your box by transfering (via keyboard) the problems in it to another box common to both players. Players must enter items into the common box in order from lesser to greater. Let's say that your items are 2+2, 4+9−5, and 5×3. If your opponent enters 4+5 into the common box, your only move is 5×3. Empty your box and you win, a fact the program notes with an irritating sequence of flashing colors.

The program does not require that you enter the answers to these problems, but only that you sequence them according to their solutions. Thus, a child must focus on multiple criteria at once. Frankly, this is no help to a child learning math basics, and it is terribly boring to one who already knows them.

US History & Geography requires sequencing as well, but here the items in your box are presidents, dates the states entered the Union, and so on. This approach does not stimulate creativity or encourage a child to research the topics.

Neither program involves the mouse. The reason, says Maverick Software, is so that the games can serve as typing tutors. I don't buy this; even quality typing tutors employ the mouse to simplify use of the package. Here, the keyboard



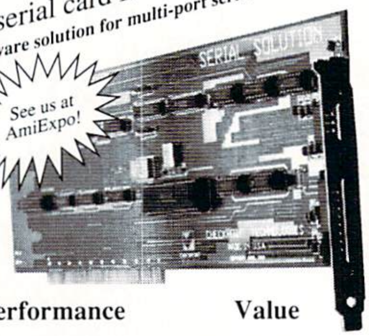
Boxed in with Discover.

serves to frustrate rather than enhance learning. You may know that Cinco de Mayo comes before Santa Lucia, but mistype Cinco, and you lose.

My son says Discover games are dumb. I agree. They are poor educational and remedial tools, and mediocre trivia games. Sadly, neither is worth the price.

Happy Trails?

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outside, Tracker's Quest by Backwoods Software does so. Unlike the Discover games, it is a friendly program with humorous touches. As Tracker's Quest loads from the Workbench, a nearly unintelligible, fast-talking country fellow invites "y'all" to join in the hunt for the wild computer beast. The initial screen contains a grid of 16 boxes. A series of buttons along the right side eases the selection of options. Except for a simple animation sequence that follows every victory or defeat, this screen comprises the program's entire interface.

Tracker's Quest advertises 16 different games. Actually, you are given one basic game with ten variations (the Tracker games), plus Music Composition, Pattern Matching, Organizer, and Letter Recognition. In the Tracker games, the computer randomly generates a trail in the grid by highlighting one box, then two, then three, and so on. Your job is to remember the order in which the boxes are highlighted, then click on them in the same sequence. While you can vary the speed, the number of squares, and the complexity, remembering a random sequence is the aim of the game.

YOUR TURN!

Not only does my six-year-old think Discover Numbers is fun, but it also teaches her fundamentals such as hand-eye cordination. This program is one of the few geared for younger children.

—Jane Miller
Rosemount, MN

In Music Composition, each box in the grid represents a different tone. As you click in a sequence of boxes, your selections are played through the Amiga's voice and stored in RAM. By carefully choosing note and duration, you can compose a song that you can then save. In Pattern Matching, the boxes conceal various letters and their duplicates. Your task is to uncover more pairs than your opponent. Although this game works well, it is just as much fun with a deck of cards. Organizer requires you to rearrange letters in some logical sequence by moving them one at a time into the only empty slot on the grid. Letter Recognition is the most useful of the lot. On each of the 36 boxes are the 26 letters and the numbers zero through nine. A digitized voice calls out a letter or number, and your job is to correctly identify it by clicking on the appropriate box. My five-year-old son thought this was great, but even though the voice is digitized, there is little distinction between the letters p, b, d, v, and t. Rapid frustration is guaranteed.

YOUR TURN!

The low price attracted me to Discover US History & Geography. I like the program because my son can play with the computer or with me. The only drawback is having to type in solutions.

—Mr. Scheid
Aberdeen, SD

Tracker's Quest keeps the attention of my children longer than Discover, but it lacks the focus and polish I expect in a commercial package. Other programs offer better per-dollar value.

BETWEEN THE LINES

Neither Tracker's Quest nor Discover moves beyond electronic flash card quality and both leave me with too many questions. Just what is being taught? And why in this way? I would appreciate an outline of the educational theory behind each. Frankly, their educational value is lost on me. ■

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To comment on these, write us (Your Turn, *AmigaWorld* Editorial, 80 Elm St., Peterborough, NH 03458) or call (800/441-4403, ext. 346) by May 18, 1990. We would like to hear from you at any time concerning other just-released products.



BACKTALK

CANDID RESPONSES TO *AMIGAWORLD* REVIEWS

Pen Pal (Brown-Wagh) and ProWrite 2.5 (New Horizons)

Loren Lovhaug's comparison of ProWrite 2.5 and Pen Pal (Jan. '90, p. 12) was well done. I have used ProWrite since its initial release and Pen Pal since it appeared as Softwood Write and File. I like both, but after my first intoxication with Pen Pal's engaging interface, have preferred ProWrite because it is faster, it better utilizes the Preferences graphics tools, and it is not as memory hungry as Pen Pal. Also, ProWrite saves your graphics as part of its files, so you need not copy IFF files and brushes to your data disk.

Amiga Genlocks

The article "Who's in Sync? Comparative Review of 10 Amiga Genlocks," by Joel Tessler (1990 Video and Animation Special Issue, p. 54) was especially insightful. There is simply no better way to judge the performance of any piece of gear that passes a video signal than to run its output through the old vectorscope/waveform monitor combo. This is important, because otherwise all we have to go on are the manufacturers' claims, which are often attempts to bedazzle us with fancy footwork.

—Joe Henry Morin
Sr. Producer, Video Image Productions
Jasper, AR

You were right-on when you called the SuperGen the best buy for the money! I purchased a Scanlock and it would not give satisfactory results with my Amiga 500. I returned it to my dealer and exchanged it for a SuperGen *and* a FrameGrabber for just a little more money.

—Richard L. Hartley
Lakeland, FL

Your 1990 Video and Animation Special Issue was informative and insightful. I was shocked, however, to see the results of the oscilloscope tests on the Scanlock genlock, as my experience with our customers is far different. We have determined the Scanlock to be the genlock of choice, especially considering its low price. My feeling is that Mr. Tessler received a defective Scanlock; VidTech told me their tests proved very different.

—John Clark
Owner, Nybbles & Bytes
Tacoma, WA

When AmigaWorld *contacted VidTech to procure a Scanlock, the manufacturer was told that the unit sent would be tested and compared with other genlocks. I am confident that the Scanlock I received was not defective. I have gotten the same ragged look with four other Scanlocks, and besides, I cannot believe VidTech would send out a review unit without testing it first. It is naive to accept a manufacturer's claims without question; a review must avoid subjectivity due to vested interest.*

—Joel Tessler

Professional Page (Gold Disk)

While Professional Page (reviewed Mar. '90, p. 86) is otherwise very powerful, its Compugraphic font disallows use of the en-dash, em-dash, all phonetic elements, and many foreign-language characters. The font is licensed to Gold Disk by AGFA, but both companies refuse to help me. No editor program is available for the font, no other company sells AGFA font sets, and AGFA refuses requests to modify the font. To a translator or professional typographer, this font is useless.

—John Wesely Starling
Kalamazoo, MI

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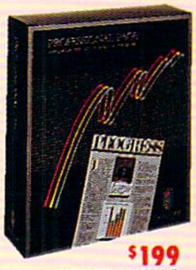
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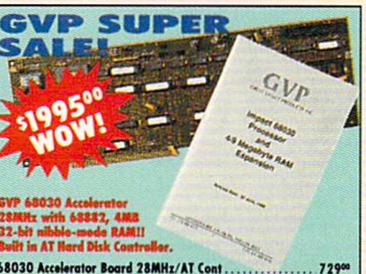


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Compiled by Jan Jackson and Carla Barker

TV Tuna

NOW YOU CAN digitize and display full-color NTSC-video graphics in millions of colors with **DCTV**, a slow-scan video-digitizing and image-processing system. The system lets you capture a frame in 10 seconds from any video source and then display them as full-color 24-bit hi-res IFF images. The image-processing software included uses a video-compression process to achieve its results. Connect DCTV to the RGB port and it creates an NTSC video signal interpreted from screen-data output. Using the Amiga's display system, DCTV delivers a compressed video-data stream that it decompresses and converts into NTSC video display. Because the Amiga is displaying what it interprets as normal hi-res, you can paint and animate in true color.

Companion products are **DCTV Paint**, a paint program, **DCTV Animation**, an animation system, and **DCTV-RGB Converter**, which gives you analog RGB video for remixing with other Amiga graphics and lets you genlock to other video sources.

DCTV and companion products are available from Digital Creations, 2865 Sunrise Blvd., Suite 103, Rancho Cordova, CA 95742, 916/344-4825. *RS #502.*

Burnt

JOIN THE CONTINUING adventures of Dirk the Daring in **Dragon's Lair: Escape from Singe's Castle** ($69.95). In Don Bluth's latest sequel, you strive to save Princess Daphne from a deadly dragon living in the bowels of his castle. As you pick your way through the series of rooms, you confront obstacles of various magnitude. Singe's Castle features a link to Dragon's Lair Part I so you can mount both games on your hard disk for extended game play. Dirk awaits with bated breath at Visionary Design, 15235 Shady Grove Rd., Rockville, MD 20850, 301/926-8300. *RS #504.*



At least Princess Daphne is never bored at Singe's castle.

Images Within

WHAT YOU SEE through your mind's eye fuels **Imagine** ($349.95), a professional 3-D object-creation, animation, and rendering package. The program, the next evolutionary step from Impulse's Turbo Silver, features 24-bit sizable image creation, a comprehensive 3-D editor, multiple view windows, full boolean math capabilities, and an animation editor that uses traditional key-frame tweening methods. To tap your creativity, get in touch with Impulse Inc., 6870 Shingle Creek Pkwy. #112, Minneapolis, MN 55430, 612/566-0221, 800/328-0184. *RS #503.*

And Then Some

A1000 OWNERS, TAKE a hard look at your options of becoming truly 2.0 compatible. Because the forthcoming enhanced chip set (ESC) will not work directly with the A1000, another type of upgrade becomes necessary. **DVS-Wonder** from Delaware Valley Software (PO Box 2007, Upper Darby, PA 19082-0507, 215/446-9227) gives your system 512K or 1MB of chip RAM on board, converts motherboard memory to fast RAM, supports the new Agnus and software selection of 1.2, 1.3, or 2.0 Kickstart ROMs. The board even promises to suppress bus noise to make it easier to add peripherals. You can buy DVS-Wonder assembled or purchase its components separately; contact DVS for pricing. *RS #505.*

Speaking of upgrades, the **A1000-Rejuvenator** replaces your system's daughterboard and lets you take advantage of the new Agnus and Denise chips. The Rejuvenator, which comes populated ($499.95) or in kit form ($349.95), contains 1MB of chip RAM so the motherboard chip RAM becomes fast RAM. For the rest of the story, hook up with Expert Services (5912 Centennial Circle., Florence, KY 41042, 606/371-9690). *RS #506.*

Pre'spect Technics Inc. (PO Box 670, Station H, Montreal, Quebec, Canada, H3G 2M6, 514/954-1483) offers an alternative to the expense of a traditional Amiga monitor and flickerFixer (MicroWay) to eliminate interlaced flicker. With the **Non-flicker Cable** ($39), you can connect your Amiga to a TTL Hercules monitor and work on an interlaced display without flicker-induced eyestrain. *RS #507.*

The **FastCard Plus** ($249) from Xetec (2804 Arnold Rd., Salina, KS 67401, 913/827-0685) SCSI controller and RAM expander fills only one slot in your A2000, leaving the drive bays free. FastCard promises to match DMA speeds without accessing memory directly. The autoconfig board holds up to 8MB of RAM using SIMM memory modules, lets you auto- ►

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Circle 128 on Reader Service card.

boot from the hard disk (with Kickstart 1.3), and offers jumperable SCSI ID for use in SCSI networks.

If good things come in small packages, the scaled-down **Mini FastCard** ($149.95) may tickle your fancy. Xetec's DMAx technology simulates DMA, autoconfigs, and supports any SCSI drive.

Xetec offers TEAC-SCSI cassette streaming back-up systems for any Amiga with **FastTape** (from $699.95) in several configurations. The systems come with archiving and a file-oriented backup and restore feature that allows access to individual files. *RS #508*.

Take the ICD **AdRAM 2080** to task with two, four, six, or eight megabytes of fast RAM for your A2000. ICD's **AdRAM 505** is a 512K RAM board for you A500 that promises reduced power use and is available populated or unpopulated.

AdRAM 520 lets you add up to 2MB of RAM and a clock. If your A500 sports a new Agnus chip, AdRAM 520 can provide 512K more bytes of chip RAM and 1536K of EXTended RAM.

The **Advantage 2000**, a SCSI host adapter for the A2000, features full word transfers with caching software, support for Syquest and other removable media drives, and flexible mounting that lets you use disk cartridges of different configurations without rebooting. Contact ICD (1220 Rock St., Rockford, IL 61101, info: 815/968-2228, orders: 800/373-7700) for a complete list of specs. *RS #509*.

Active Circuits (106 Highway Suite 101, Manasquan, NJ 08736, 201/223-5999) and Sony jointly unveiled a series of **Rewritable Optical Drives** capable of storing 650MB per disk. The drive retails for $4995, and for $495 you get a kit including utilities, backup software, and drivers for Commodore's A2091 hard disk controllers. *RS #570*.

With **Barney Bear Goes To School** (not to be confused with our chief, ***Doug*** Barney who has already attended school. . .), Free Spirit (PO Box 128, Kutztown, PA 19530, 215/683-5609) hopes to show kids that learning can be fun! The program begins with an interactive story during which you help Barney Bear wake up and get ready for school. Then it's off to class and a menu of activities including alphabet, number, shape, and color identification.

Let **Doctor Ami. . .** ($49.95) soothe your memory and hard-disk woes. This diagnostic package consists of two programs. Memory Doctor scans all system and expansion memory, locates and identifies defective and incorrectly seated chips, and maps bad memory locations. Drive Doctor scans all disk sectors, and locates, identifies, and maps hardware and software errors. *RS #510*.

2-D to 3-D? **AutoScript** ($129.95), a PostScript-to-3D translation package lets you import complex and point-accurate PostScript drawing files, including Bezier curve information, directly into Sculpt 4D (Byte by Byte) or Turbo Silver (Impulse). The program works from drawing packages in other formats—Adobe Illustrator 88, Aldus Freehand, LetraStudio—as well as with Amiga programs. Get real by contacting Computerall Services (3 N. Walnut Ave., New Hampton, IA 50659, 515/394-3778). *RS #511*.

Saddleback Graphics and Prism Computer Products offer a companion disk for use with My Paint, the children's paint program from Prism.

Majelix Characters ($24.95) is a beginning reading method based on phonics and sight reading with 29 characters. Centaur Software Inc. (PO Box 4400, Redondo Beach, CA 90278) distributes My Paint and coloring disks. *RS #512*.

You can use the DigiFeX **Net Utilities Software/Hardware Package** to either harvest information from a Macintosh network for output to a laser printer, or to create an Amiga-only network of up to 32 nodes on A500 or A2000 systems. Net Utilities shared resources facility lets Amigas use other nodes' peripherals, and its monitoring utility allows nodes to monitor all activity or only activity associated with selected Amiga or Macintosh nodes. Get the net and call DigiFeX (610 Main St., Oregon City, OR 97045, 503/656-8818). *RS #513*.

ProWrite 3.0 ($175), the lastest upgrade to the popular graphics word processor from New Horizons (206 Wild Basin Rd., Suite 109, Austin, TX 78746, 512/328-6650) now features more macros, ARexx support, and a thesaurus with over 300,000 cross references. The program's multiple-column feature allows for snaking or parallel text flow so you can run three documents in column form on the same page. *RS #514*.

Give your A500 or A2000 a boost with the **Minimax-4** ($179), a 4.5MB internal RAM expansion board from Centaur Software (4452 Redondo Beach Blvd., Lawndale, CA 90260, 213/542-2226). The card comes configured in 512K increments. An optional piggyback board lets you expand to 6MB. *RS #515*.

Putting its 68030 accelerator technology to use, CSA (7564 Trade St. San Diego, CA 92121, 619/566-3911) unveiled **Mega-Midget Racer**, a 68030 processor accelerator for the A500 or A2000. The card features surface-mount technology that gives you selectable clock speeds of 20, 25, or 33MHz, support for floating-point math co-processor at speeds up to 40 MHz, and 32-bit 512K SRAM for the system kernel. You also get a 32-bit RAM expansion bus and software-selectable MC-68000. *RS #550*. ■

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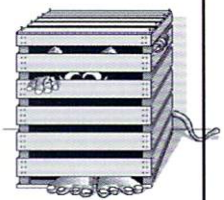
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HELP KEY

AmigaWorld's own bug zapper will put an end to your summer annoyances.

By Louis R. Wallace

Compressed Distress

Q: *When I send a command such as LPRINT CHR$(27) + "k2S This is compressed", it doesn't work. Instead of compressed text, I get normal text mode. I can get it to work using escape sequences if I output to the PAR: device like this:*

```
OPEN "PAR:" FOR OUTPUT AS #1
PRINT #1, CHR$(27) + "&K2S This is
compressed."
CLOSE #1
```

Is this the only way to make my printer access the text modes from BASIC?

H. Roberts
Linn Grove, IA

A: Your problem arises from the fact that in most (if not all) cases the codes the printer driver accepts and understands are *not* the same as those of your printer. To make software as printer-independent (and compatible) as possible, the Amiga uses a standardized set of printer codes. When it receives those codes, the printer driver translates them into the codes your particular printer understands.

In this case, sending the codes for compressed text as specified by your printer manual with the LPRINT command won't work. You must use the standard printer codes, instead. You can find them in the *Amiga ROM Kernal Reference Manual: Libraries and Devices* ($34.95, Addison-Wesley, Jacob Way, Reading, MA 01867, 617/944-3700) in the Printer Device section. The simple Amiga Basic program below demonstrates how the method works. (Note that not all printers have these particular functions.)

```
' AmigaBasic Printer Commands
'
' A simple example outputing
' escape codes to the printer.
'
' Printer codes from the Amiga
' 1.3 RKM, page 750
'
' Define codes
Esc$ = CHR$(27)
Br$ = CHR$(ASC("["))
EB$ = Esc$ + Br$
W$ = CHR$(ASC("w"))
M$ = CHR$(ASC("m"))
V$ = CHR$(ASC("v"))

A$(0) = CHR$(ASC("0"))
A$(1) = CHR$(ASC("1"))
A$(2) = CHR$(ASC("2"))
A$(3) = CHR$(ASC("3"))
A$(4) = CHR$(ASC("4"))
A$(5) = CHR$(ASC("5"))
A$(6) = CHR$(ASC("6"))
A$(7) = CHR$(ASC("7"))
A$(8) = CHR$(ASC("8"))
A$(9) = CHR$(ASC("9"))

' Define sequences

CondOn$ = EB$ + A$(4) + W$
CondOff$ = EB$ + A$(3) + W$
ItalOn$ = EB$ + A$(3) + M$
ItalOff$ = EB$ + A$(2) + A$(3) + M$
LargeOn$ = EB$ + A$(6) + W$
LargeOff$ = EB$ + A$(5) + W$
BoldOn$ = EB$ + A$(1) + M$
BoldOff$ = EB$ + A$(2) + A$(2) + M$
SubOn$ = EB$ + A$(4) + V$
SubOff$ = EB$ + A$(3) + V$
SupOn$ = EB$ + A$(2) + V$
SupOff$ = EB$ + A$(1) + V$

' output some text

LPRINT CondOn$;"Condensed On."
LPRINT CondOff$;"Condensed Off."
LPRINT ItalOn$;"Italics On."
LPRINT ItalOff$;"Italics Off."
LPRINT LargeOn$;"Enlarged On."
LPRINT LargeOff$;"Enlarged Off."
LPRINT BoldOn$;"Bold On."
LPRINT BoldOff$;"Bold Off."
LPRINT SupOn$;"Superscript";
LPRINT SupOff$;
LPRINT "Normal";
LPRINT SubOn$;"Subscript";
LPRINT SubOff
LPRINT "All Done!"

' exit gracefully

END
```

No Imports

Q: *Help! I have a Lotus 1-2-3 spreadsheet file I want to run from the Amiga program Analyze!, which claims to be Lotus 1-2-3 compatible. According to the Analyze! manual, you can use the GET and STORE commands to load Lotus files, but so far I have had no luck at all. The spreadsheet file I need is on my IBM-formatted 3½-inch disk, which Analyze! refuses to recognize. Any suggestions?*

J. Riedel
Ft. Benning, GA

A: While Analyze! can use some 1-2-3 spreadsheets, you are suffering from a misconception about how it accesses them. Analyze! does not have the ability to read IBM-format disks. You first have to copy the file from MS-DOS format to AmigaDOS format. The easiest method is to find someone with a Bridgeboard (perhaps your dealer). With your files on a 5¼ MS-DOS format disk, you can use the Bridgeboard and the AREAD/AWRITE routines to copy your Lotus 1-2-3 files to the Amiga. Or, you could use a program such as DOS-2-DOS ($55, Central Coast Software, 424 Vista Ave., Golden, CO 80401, 303/526-1030), which allows you to copy MS-DOS and Amiga files back and forth. The cheapest method is probably to use a modem and some telecommunication software to transmit the file from a PC to an Amiga (or to a BBS where you can then download it to an Amiga). Once you have the Lotus file on an Amiga-formatted disk, you can use Analyze!'s GET command to load the file. ■

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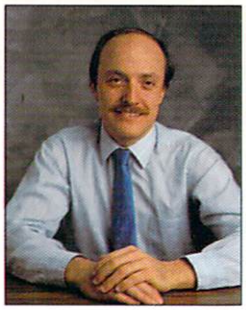
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Supra Corporation



HORS D'OEUVRES

Hints, tips and techniques from your fellow Amiga users.

Compiled by Tim Walsh

Rings Around Digi-Paint 3

WITH NEWTEK'S DIGI-PAINT 3, you can create ring-shaped brushes. Simply select a thick brush, a drawing mode (circle, polygon, etc.), and draw a shape. If you click the scissors icon and then click Repeat, your shape becomes a hollow ring composed of the pattern on the screen underneath it. You can use this ring in any mode Digi-Paint offers.

Lin Zilun
Los Angeles, CA

Carrier Preservation

IF YOU USE a modem with your Amiga, you may have lost your carrier on more than one occasion when an incoming call interrupted your on-line session. Most telecommunication programs instantly hang up the modem when there is carrier interruption (usually caused by call waiting). As I have suffered one too many unwanted disconnections, I turned to the documentation accompanying my Supra 2400 modem, and I found that if you manipulate registers 9 and 10, you cure the problem.

Register 9 indicates the amount of time the modem requires to recognize a signal as a carrier, and register 10 represents the time it takes to hang up after the modem detects a loss of carrier. If you enter the command ATS10=50, the modem waits five seconds after it detects an incoming call, and then, without breaking the connection, it checks to see whether the original carrier is still present.

If you have experienced similar problems with your modem, give my technique a try, and disconnections may become a thing of the past.

Matthew D. Gerald
Portsmouth, OH

Hard Disk Drive Menus

FACED WITH THE problem of each member of my family wanting to share our hard-drive-equipped Amiga 500, I knew I had to develop a method of sharing space on the hard disk without sharing directories. I did not want my WordPerfect business letters mixed in with my son's school work.

Instead of launching a program from a standard Workbench icon and then saving it by entering a path name to another directory, I set up a Workbench Icon menu for each application we share. When one of the icons is double-clicked, IconX executes a script that starts the application. For instance, when the WordPerfect icon is double-clicked, IconX executes a script that reads:

```
ECHO "Now starting WP"
DH0:wp/wp
```

This not only launches WordPerfect, but when I save a file, the script returns the file to the directory it was launched from. Therefore, when I save a file, it goes straight to the correct directory.

Theron A. Patrick
Governors Island, NY

Minimal RAM Requirements

IF YOU USE a stock 512K Amiga 500 or 1000 and find yourself running out of RAM all too quickly, here's some advice that will keep the insufficient memory Guru at bay. Load your Workbench's Devs/mountlist into a text editor and change all "BUFMEMTYPE" references to a value of either 4 or 5 to signify fast RAM.

If you have a Supra hard drive, you can use SupraEdit to change all references of "ANY" RAM in the mountlist to "FAST" RAM. Your applications will not only work more efficiently, but you will have more chip RAM available for memory-intensive programs.

John Kratz
Mattydale, NY

Wild Lists

AS AN AMIGADOS 1.3 user, I find using the # and ? wildcards (two shifted characters) a bit ungainly when I want to list the contents of disks and directories. To circumvent this problem, input an ALIAS command as follows:

```
ALIAS lw LIST [ ]#?
```

Now, whenever you need to perform a selective listing of files and directories beginning with, for example, the letter S, just enter:

```
lw S
```

and every file and directory beginning with the letter S is listed to the screen. Add this command to your Shell-startup or startup-sequence and it is automatically invoked along with the Shell.

Gregory W. Grynkewich
Gilbert, AZ

If you have an idea you'd like to share with our readers, send it to Hors d'oeuvres, AmigaWorld *Editorial, 80 Elm St., Peterborough, NH 03458. If your idea gets published, you'll receive an* AmigaWorld *surprise gift.* ■

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Public Domain Library

We are the Offical Public Domain Library of Antic Amiga Plus, we have been the offical PD library of Amiga World, and we are also available through Compute! Amiga Resource. Find out why these magazines choose us! Each of our disks is chalked full of nothing but the best programs. The first two letters on each disk indicate the orientation of the disk; DD# intermediate to advanced - often contains source, WB# general interest - most programs can be run from the workbench, and FD# games and entertainment. Order our catalog and receive a coupon for a **FREE** volume on your next purchase.

Featured Disk

WB12: Disk Utilities - This great disk is loaded with wonderful utilities for everything including making disk labels, disk cataloging, disk optimizing, disk and file recovery, archive and organizing, and all sorts off file minipulation. Also includes SID a real must have!

New Disks

FD21: Arcade Games - This disk contains Trek - startrek shoot em up, Blood Money Demo - normally we don't include demos in this case we made an exception. This is the first level of this great arcade game, very playable demo. If you can beat this demo, buy the commercial version! Boomrang - two player shoot em up, Crystall - arcade adventure game, and push.
FD22: Arcade Games - This disk has MoonBase - The best lunar lander game we have seen in a long time, very challenging Also BoingGame - a maze type, donkey kong type game.
FD23: Text Adventure Games - This disk is loaded with three great games, Adventure - this is an greatly enhanced version of the first AI game ever written on a computer! THE true classic even the genera was named after this game, JackLand - In the words of the arthur "This is a text adventure, set in the COMPLETELY FICTIONAL Atrashi Computer Company, owned by the COMPLETELY FICTIONAL Jack Trammeler and run by assorted members of his COMPLETELY FICTIONAL family. (P.S.: Did I mention that this story is COMPLETELY FICTIONAL?)", Also World and a adventure graphing/mapping program.
FD0024:Strategy Games and Others - Includes Dicey, a yathzee type clone, MM a master mind type clone, Flipper an othello type clone, China an great implementation of Shangi, CircutWars a challenging game based on electronics, and Etrain a computer based model train set construction set for the enthusiast.
FD25:Tactical Games - Empire (133w)Empire is a rich simulation of international politics, economics and war, which is played over a period of a few of months by 2 or more people. The Empire world is made of a toroidal grid of sectors consisting of wilderness, mountains and water. Players govern countries, which start out as a pair of adjacent sectors and soon spread into large areas requiring much management and protection. Various sector types can be created to build ships, bridges, guns, shells, airplanes, and research labs that make medical and technological breakthroughs. Players can run their countries from the normal Amiga keyboard, or via a modem at 300 to 2400 baud.
FD0026:Arcade Games - Marble slide, truly this is a commercial quality game. Similar to a Lucas game named Plumming, excellent playablitly and entertainment, Mutants - a small version of the arcade game of the same name, also SuperBreakout a pong/arknoids type game.
WB17: General Utilities - Includes several interesting programs, DiskX - Great disk sector editor, Snap - Cut and paste text between different windows, , also on this disk - calendar generator, diet program, workbench scroling text, scale convertor
WB18: Word/Text Processors - This disk contains the best editors that we could find. Includes, WordWright(v6.2) a full featured word processor with mail merge and outlining capacity, Dme(v1.35) a great programers editor with strong macro features, and TexED(v2.8) an enhanced Emacs type editor.
WB19: Artificial Intelligence - This disk will be of interest to old hands and new in AI both programing and concepts, contains Eliza - an AI personal pyschologist, a true classic, Critters! - a bug gone smart AI experiment, and lots of articles on the subject. This disk submitted directly to us by Arthur T. Murray.
WB20: General Interest - On this disk is, DiskSalv V1.42 a disk recovery program for all Amiga file system, FixDisk V1.0 another file recovery program with features DiskSalv doesn't have, 3DLook a program that gives a 3D appearance to your WorkBench, Clean V1.01 a program to de-fragment memory, Tracer Originally prepared and released as a commercial product by Rapide, allows one to take a picture in 16 gray level format from a Digitizer system, then hand outline or Trace any part of that image.
WB21: Music - On this disk are several modern songs and a great Sonix music player, also a utility to remove the sound filter.
WB22: Fonts #3 - Several more great fonts. These, like the other font disks work great with Dpaint and WYSIWYG word processors.
WB23: Graphics and Plotting - Plot (20b) a three dimensional mathematical function plotter. Can plot any user defined function, all aspects controllable, an greatly enhanced update to Plot on WB1, BezSurf2 is a program for producing bezier surfaces of revolution. It produces awesome pictures of objects one could turn on a lathe. Can also map iff image files onto any surface that it can draw. Now compatible with most 3D packages Update to Surf on WB1, and VScreen makes a virtual screen anywhere. For you DTP people this is a absolute must have, it allows full page editing without redraws!
WB24:Animation and Paint - On this disk, DA a complete commercial quality cell orientated animation package. Movie an "ANIM" player for standard animation. QuickFlix an IFF slide show and cell animation program. Also on this disk are two PD paint programs of good quality.
WB25:Educational - On this disk are two programs that can generate maps of differing types, World Data Base uses the CIA's data base to generate detailed maps of any enter user global coordinate. This powerful program will zoom in or out to give you a satellite based map or a birds eye view. DrawMap another map generator with different features. Also Paradox a great demonstration of Albert Einstein General Theory of Relativity.
DD53: Programing - This disk contains a complete forth implementation for the Amiga. Also on this disk is DevKit - a collection of C and Arexx routines to aid in your software development.
DD54: Compression - This disk is loaded with ALL of the best file compression programs and aids for the Amiga. Many of the programs can be used by the new user. Includes Arc(2.3), Lharc(1.0), Lhwarp(1.03), Pkax(1.0), PowerPacker(2.3a) a must have by all, Zip(1.0), Warp(2.04), and Zoo(2.0). Also IFFcrunch an excelent compression for IFF files.

Other Great Disks -

FD5: Tactical Games - BattleForce(3.0); A game that simulates combat between two or more giant, robot-like machines. Simple words can't begin to give you the feel of piloting a 30 - 40 foot tall, fire breathing, earth shaking colossus that obeys your every whim. BullRun - a Civil war battle game, Metro - you play the role of a city planner. Build wisely and your system will be a success, but poor planning will lead to disaster and financial ruin. Very good Amiga version of Kingdom, Golden Empire, Etc. Very very habit forming.
FD6: GAMES! - This disk is chalked full of games including; Checkers, Clue, Gold - A new slide the pieces puzzle, Jeopard - An enhanced version of Risk, RushHour - Surprisingly addicting, and SpaceWar - Best described as a cross between Combat-Tanks and asteroids.
FD7: PACMAN - This disk contains several pacman type games including; PacMan87, MazMan and Zonix.
FD8: Games! - This disk is full of games, game hints and a few game editors (cheat programs) including: Antepenult - The best PD Ultima type going, GameEditors- Crystal Hammer, BardsTale, TV Sports Football, and FaeryTale, GameHints-These are: Zak McKracken, Shadow Gate, FaeryTale, Space Quest II, Dragon's Lair, and others.
FD9: Moria - a very well done port of an UNIX based character adventure game. This has great graphic controls, multiple spells, similar to Larn and Hack. Takes up the whole disk. Play time several days!
FD10: HackLite - A dungeon adventure game. Considered a must have classic. This is the second release of this game on the Amiga. Originally a UNIX game. Great Amiga graphic interface. Fills the whole disk. Play time several weeks!
FD12A,FD12B: Star Trek, The Game - This is by far the best Star Trek game ever written for any computer. It features mouse control, good graphics, digitized sound effects and great gameplay. Counts as 2 disks. Req. 1Mb and two drives (or hd).
FD13: Board Games - contains multiplayer Monopoly, Dominoes, Paranoids, and others.
FD14: Dungeon Master Hints and Arcade Games - DM maps, spells, item location, and hints and more, also on this disk, Hball - an arknoid/break out type game, Trix - a Qix type clone.
FD15: RayTracing #2 - You know those pictures you see with the highly reflective surfaces, thats raytracing. Learn about raytracing the inexpensive way with, DKBTrace and DBW_uRAY (micro raytracer). Source code included
FD16: Strategy Games - Includes Diplomacy and Empros, both great conquer and rule multiplayer games similar in concept to Simcity and Populas. Also includes blackbox, hearts, and others.
FD17: Educational Games - This disk includes several games for the younger memebers including geography, math, science, and word games, also includes Wheel of Fortune.
FD18: Arcade Games - Includes Bally a qix type clone, Billard a pool game, Paccers, a pacman game with screen editor, also Efj, a lunar lander type game, and others.
FD19: Arcade Games - Raiders a space raiders clone that can be 3d compatible, Frenzy a shark feeding nightmare, VollyBall a good implementation, and Jar impossible to describe but fun game.
FD20: Tactical Games - MechForce(3.65); A game that simulates combat between two or more giant, robot-like machines. Simple words can't begin to give you the feel of piloting a 30 - 40 foot tall, fire breathing, earth shaking colossus that obeys your every whim. This game is the full featured update to BattleForce(3.0) on FD5.
WB4:Telecommumnication - This disk contains several excellent pd communication programs designed to get you on line quickly and easily, Access (1.42) - A very nice ANSI term program based on Comm v1.34, but with the addition of transfer protocols, Comm (1.34) - Last version of one of the best public domain communications programs ever made on the Amiga, Handshake (2.12a) Handshake is a Full featured VT52/100/102/220 terminal emulator, and JRComm (0.94a) another great com program.
WB5 - Fonts #1- Several fonts (35) for the Amiga, also included are five PageStream fonts,and ShowFont - a font display program.
WB6: Fonts #2 - ShowFont(4.0) This program allows you to quickly and painlessly view all 256 characters in a typical font. AmigaDos fonts (some up to 56pts)
WB7: Clip Art - This disk is loaded with black and white clip art. Art includes, trees, watches, tools, women, computers, etc.
WB8: File Management - Great disk. UtilMaster - From your workbench move, copy, delete, read, show, edit, arc, run any command, and much much more!! Atree - similar to UtilMaster but hierarchal tree displayed. Also MachII - a must have mouse and keyboard enhancer, and Go - an ancient chinese game.
WB9: Icons - Truly a multitude of various types and kinds. Also includes IconMiester, IconLab, and others great utilities to help generate icons.
WB10:Virus Killers - The latest and best VirusX(4.0), Kv(2.1), and ZeroVirus(1.3).
WB11: Business - Clerk(4.0), finally a full featured business accounting PD program for the small to medium company. Includes receivables, payables, end of month and much much more. This version comes with the full user docs!
WB13: Printer Drivers and Generator - over 70 drivers, and if these don't do it, PrtDrvGen an easy to use program to make your own.
WB14: Video and Anim Utilities - on this disk are several utilities to manipulate anims including cutting, pasteing, and combining and more. For the video enthusiast we have included multiple slates, video titling and other useful utilities. Also on this disk is a full featured video cataloging program.
WB15: Business - This disk contains a spreadsheet, a database, a project/time management program and financial analysis (stocks).
WB16: Business - This disk contains an inventory manager, a loan analysis program, a great calendar/schedular, a rolidex program, and pennywise a good "Cash Book" accounting for home or office.
DD44: ARP - On this disk you will find the complete ArpRel3.0 This is the official AmigaDOS Resource Project (ARP) release 1.3. ARP makes many improvements to AmigaDOS and makes your system easier to use from the CLI (See also dd45), and DiskSalv 1.3 - By far the best disk and file recovery available.
DD45: AREXX PROGRAMS - This disk contains several useful arexx programs and examples, PopCLI4 - The latest of a must have utility. ArpUserDocs3.1 - Finally, the documentation for the 3.1 release of Arp which replaces most 1.3 AmigaDOS commands (see dd44).
DD47: Pascal - This disk contains everything needed to program in pascal. Includes, A68k (1.2) 68000 assembler, Blink linking software and PCQ (1.0) a modest Pascal sub-set compiler.
DD49: C Compiler - contains zc(1.01) fully K&R, zcc(1.0) front end, A68k(1.2) assembler, Blink linker.
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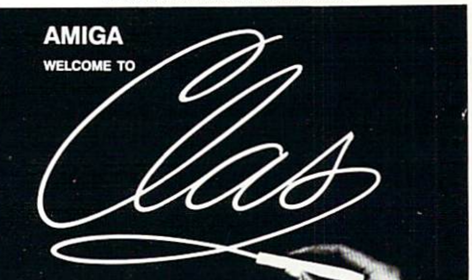
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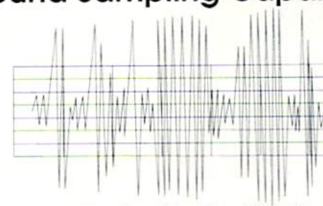


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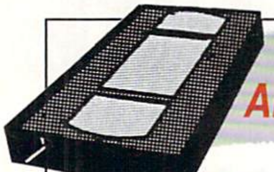
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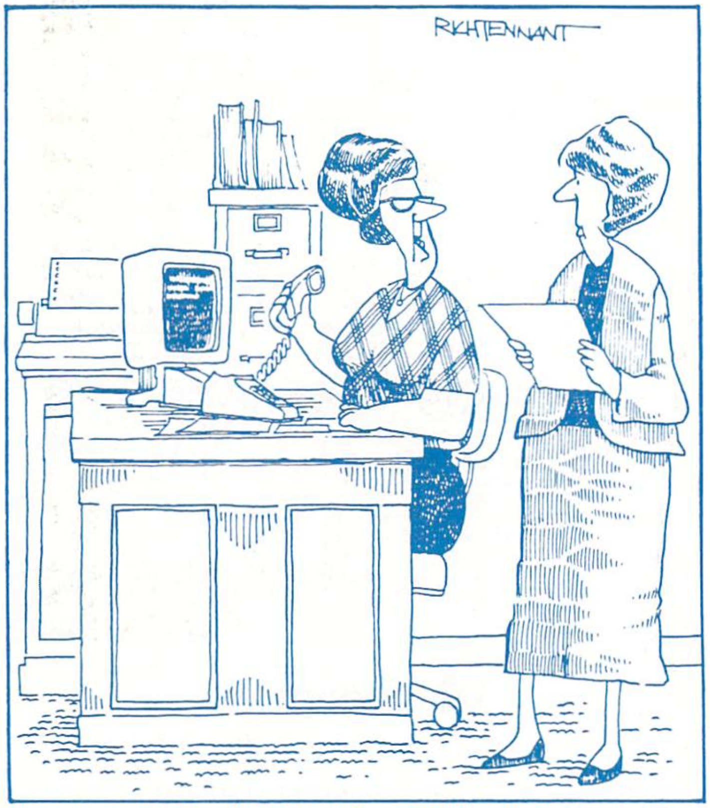
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New Products, Part II

Appendages

Taking robot-arm technology one step further, Parts are Parts Labs Ltd. recently announced its complete line of *Robot Limbs*. Designed for programmers or anyone who works long hours, these items are invaluable when you want to rest your head on your hands and still use the keyboard. How many times have you tried to place a hefty manual on your lap but you just weren't able to keep it there? Robot Legs can double your lap space in just one sitting.

A Grand Design

Don't just leave your Amiga naked for the whole world to see. Try an *Amiga Wardrobe* on for size. Tasteful linens and poplins from Charles of New York can garb your good friend without inhibiting mouse movement, keyboard entry, or disk-drive insertion. Choose from Charles' palette of colors and a seasonal assortment of fabric weights. Your Amiga will soon be the toast of the town!

I'm Okay; You're Not

Do you ever wonder why your computer crashes? *Understanding Amiga Archetypes: Cybernetic Self-Help*, a Jungian counseling guide, offers provocative answers to questions you have been too shy to ask your dealer. End those tortuous, hand-wringing programming encounters and get your system on the road to recovery.

You Kill 'em, We Chill 'em

You are the county coroner in *Mortuary*, a new game from Down East Software. To win, you must locate and retrieve the body, find the cause of death, quarantine the source of the illness (death usually occurs as the result of human contact with a contagious, killer computer virus), and issue the death certificate (printing utility included). Slabs of fun.

Sticky Fingers

A breakthrough hardware concept, the *MouseBrush Art System*, adds the realism of acrylic painting and true brushstrokes to your favorite Amiga paint program. The MouseBrush is a weighted vinyl ball densely covered with synthetic bristles. In use, it replaces the regular mouse ball. Simply remove the baseplate from your Amiga mouse, pop out the old ball, squeeze acrylic tube paint into the cavity, and drop in the MouseBrush. Working on canvas instead of a mouse pad, boot up your favorite paint program and paint as you normally would. Match the brush size on screen to the stroke that MouseBrush leaves on the canvas. When you are ready for a new color, just pop out MouseBrush, rinse the mouse with cold water (never immerse any computer component in hot water) and squeeze in paint from another tube. The package includes six tubes of standard artists' acrylic paint and a comprehensive user's manual.

Ear to the Wall

If you hum a few bars. . . Dr. T's Music Software recently acquired **"M" for the Amiga** (as well as some Mac and Atari products) from Intellegent Music. Registered owners of "M" can contact Dr. T's (617/244-1542) for upgrades and tech support.

Dr. T's **Phantom**, a SMPTE synchronizer, is the target of a design team from Elan Design.

Another musical marriage—Blue Ribbon Bakery and Checkpoint Technologies—promises new support for 32-channel MIDI configuration on the Amiga. Blue Ribbon's MIDI sequencer, **Bars&Pipes**, provides access to additional MIDI channels provided by Checkpoint's dual-port serial card, **The Serial Solution** (which appeared in the March '90 Hardware Buyers Guide with some inaccuracies). The unit actually retails for $199, works on A2000- and A3000-series Amigas, and operates in any Amiga Zorro slot.

I Can't Get No. . . Just as the Rolling Stones must have tired of playing "Satisfaction," Dan Silva, celebrated creator of DeluxePaint, needed a vacation from the Amiga. He has recently been working on a project for IBM-developer Autodesk, after parting ways with Electronic Arts. Although Silva "enjoyed working with the Amiga," he was "ready for a change. . .[the Amiga] is a bear to program," he confided to *AmigaWorld* not long ago. As soon as he's had enough of MS-DOS, he'll be back working from a clean slate.

Hi-Tech Divining Rod? An Australian company is reportedly working on a satellite image-processing system that will allow viewing and manipulating images for use by land planners, foresters, and geologists. The program, which displays land formations as detected by the satellite, is the type commonly used by oil companies to locate possible drilling sites.